The Bradshaw Lecture

ON THE

BRAIN STRUCTURES CONCERNED IN VISION AND THE VISUAL FIELD.

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COMPARATIVE ANATOMY.

In the lower vertebrata a simple brain is formed by enlargement of the anterior end of the spinal cord, and by the widening and division of its central canal to form ventricles. Upon this primitive brain swellings are developed in connexion with the sense of sight and smell. The sense of smell seems first of early importance, probably for selection between nutritious and poisonous foods, or a means of safety.

In *fishes* we find the visual organs well developed, and varying in importance with the necessity in the species for more or less perfect sight, optic lobes and tracts, an optic chiasma and infundibulum, a third, fourth, and lateral ventricles, and corpora geniculata underneath the optic thalamus. These often vary conversely in importance with the olfactory region, which is enlarged when smell is the more needed function. In all fish the optic nerves cross quite separately, one above the other, from one eye to the opposite optic lobe, or one nerve may pass through a slit in the opposite one.

Amphibians.

In amphibians the brain is usually of low type, but rather large. In the proteus, which is practically blind, the optic nerve lobes are scarcely recognizable, but in the frog they are large, and form the broadest part of the brain.

Reptilia.

In the reptilia the brain is long and narrow, but it has become much increased in size, and is well differentiated, and we get a very definite cerebral cortex. The three mantles of the brain exist as found in mammals:

1. The basal pallium, or pyriform;
2. The marginal pallium, or hippocampal; and
3. The neopallium, or higher cortex (brain proper).

Birds.

The brain in birds is broad and highly developed, enlarged chiefly by the size of the corpora striata. All the structures upon which sight depends are very well developed. The thalamus and optic lobes are highly organized, and there are even present small temporal and occipital lobes. In birds the optic chiasma is single and complete, and crosses over the infundibulum. The bundles of fibres from each optic nerve interlace and alternate, but those of each nerve completely decussate to the opposite side. The optic tracts pass round the optic thalami, and show well-developed geniculate bodies.

In birds of prey, where rapid co-ordination between the seeing and capturing of their prey is essential, the optic lobes are very strongly developed. Vision is, as a rule, panoramic—one eye for each side. (The fowl sees his food one eye at a time.) In the owls and hawks, whose eyes look forward and who undoubtedly possess a considerable field of binocular vision to enable them to catch their living prey, probably no fibres from the optic nerve pass direct without decussation. Their vision is binocular but not steroscopic, for which direct as well as decussating fibres are required.

Marsupials.

In the marsupials the brain becomes still more highly organized. On the mesial surface of the hemispheres there appears a sulcus which runs horizontally behind and parallel with the hippocampal. This is the calcarine or splenial, about which the cortical substratum for vision is placed; it is one of the earliest, best defined, and most constant fissures of the brain, and it can already be shown to form the calcar avis in the ventricle. A genual and a rostral sulcus also show on the mesial surface of the hemisphere, although no corpus callosum as yet exists.

Insectivora.

When we reach the placental mammals a corpus callosum becomes developed and completes the three great commissures with the anterior and the hippocampal.

In the colugo (insectivora) the sulci of the brain become more marked. The most definite is a deep calcarine sulcus running horizontally forward almost the whole length of the mesial surface of the hemisphere; there are also very large anterior quadrigeminal bodies.

Rodents.

In the many families of rodents there is a peculiar absence of sulci, especially on the mesial aspect of the brain, and the calcarine fissure is rarely seen. The squirrel requires very accurate sight, and he has large optic nerves and very well developed anterior quadrigeminal bodies. The rabbit and the hare probably possess a very acute sense of hearing. They live to avoid being captured. Their eyes are placed so much on the side of the head that each carries an enormous range over its field of vision, and they can see laterally and behind almost as well as in front. This wide panoramic vision cannot well be associated with any great binocular effort; nearly all the optic nerve fibres decussate.

Carnivora.

In the carnivora the brain proper is highly developed; it passes forward over the olfactory bulb, and backward over the cerebellum. There is a very high degree of binocular vision.

In the *fruit eaters* the eyes are at the side of the head, and they possess only a limited convergence. But in the *Felidae* and others the eyes are set forward, and the pupil is very active. These animals require good distant vision, often when the light is dull, and they also need very reliable closer sight, and a most perfect co-ordination of the eyes with the fore limb by which they catch their prey. In the optic chiasma there are considerable direct as well as decussating fibres. There is a deep calcarine sulcus which with the intercalary shuts off a posterior lobe from the rest of the brain. In some species there appear secondary fissures running out of the calcarine, or even a definite retrocalcarine.

Ungulates.

The ungulata are large animals, and they need a large brain, but the mesial area is very simple. There is no high specialization in the calcarine fissure; it is large, and placed behind the splenium. It joins the intercalary, and this the genual, showing a complex splenial, or a form of cingular arc. The eyes are usually placed on the side of the head, and separated by the forehead or nose. There is a wide area of periscopic sight, but they only have a limited amount of convergence and binocular vision. In the horse about one-sixth of the fibres decussate.

In periscopic vision each eye is responsible for the field on its own side, and as this is represented on the opposite side of the brain all the optic nerve fibres must decussate. When the eyes tend to converge and give slight binocular vision, a part of the nasal side of each field is overlapped. The superimposed parts have crossed to the opposite side of the middle line. The extreme nasal side of the right field is now concerned with the left field of vision, and the fibres that represent this must go to its opposite side of the brain.

As the eyes turn more forward, more and more of the nasal fields overlap, and more and more direct fibres are required. In perfect stereoscopic vision, both visual axes must be turned towards the object looked at. The whole nasal field is carried across the middle line; we thus have an almost complete overlapping of the two fields, and what is more important, overlapping of the objects seen by the maculae.

The Macula.

The acuity of the macula depends on the delicate association of each cone (7,000 or 8,000 in number) with bipolar nerves and ganglion relay centres. Probably both halves of each macular bundle of nerve fibres pass along the decussating and direct portions of both optic tracts, and are widely distributed over the visual cortex of both cerebral

hemispheres. Or if there is a localized macular area, it is especially well supplied with blood, and has a great resisting and recuperative power.

Lindsay Johnson says that a true macula is only found in man and the true monkeys. It would perhaps be more accurate to say with him, that parallel vision with complete convergence is only found in animals that have a macula lutea.

Monkeys.

In the monkeys the calcarine sulcus becomes the centre of further developments. In the aye-aye and lemurs it is somewhat vertical, but in the tamarin, one of the anthropoid apes, and the marmoset, a long single sulcus is prolonged horizontally far back into an elongated occipital lobe, which measures nearly half of the brain. In the squirrel monkey (*Cebidae*), almost half the hemisphere lies behind the splenium. In this large occipital lobe the calcarine sulcus terminates in a wide-shaped bifurcation, and several other compensatory calcarine sulci are developed. The collateral runs forward on its ventral side and from its dorsal runs up a parieto occipital sulcus close behind the intraparietal.

In the macacus we have the higher organization of the old-world monkeys. The smell organs are well seen, but diminishing. The long bifid retrocalcarine, the callosal and the parieto-occipital, with the intraparietal sulci, are well developed, and the general conformation of the brain, especially in the occipital lobe, closely resembles that seen in man.

THE VISUAL PATH IN MAN.

The optic chiasma has very important relations with the third ventricle and with the structures adjoining it; and lesions involving this ventricle would be likely to cause visual symptoms.

The lamina cinerea, the very vascular "anterior perforated space," and the tuber cinereum, are important relations of the optic chiasma and bitemporal defects of the visual fields might be expected to arise from many directions. In some cases of primary optic atrophy I have seen a narrowing of the nasal fields which I have taken to be due to some error in the anterior perforated space.

Acromegaly seems undoubtedly to depend on a diseased condition of the pituitary body, and the close relationship of the latter with the chiasma accounts for the early onset of bitemporal hemianopsia. The condition due to implication of the chiasma may, however, be very marked without any symptoms of acromegaly, and therefore presumably without implication of the pituitary body.

The fibres in the chiasma are decussating, direct, and intercerebral. Special "interretinal" fibres probably do not exist. The "intercerebral" are not found in the optic nerve; they join together the median geniculate bodies as the commissure of Gudden, and are probably concerned with the sense of hearing.

In all vertebrata below mammals, and some mammals, the optic fibres are said all to decussate in the chiasma. In the higher mammals and in man the decussation is incomplete. A certain portion of fibres passes direct from the temporal side of the retina to the same side of the brain.

The greater degree of binocular vision, the larger the bundle of direct fibres. In man the decussating fibres are about three-fifths of the whole, the other two-fifths pass directly to the same side of the brain.

The chiasma is connected with the brain by the optic tracts. They wind round the cerebral peduncles, each dividing into a mesial and lateral root. The mesial root is small; it contains the intercerebral fibres of the chiasma, and it ends in the mesial geniculate body, the brachium inferius and the lower colliculus of the corpora quadrigemina—all these are concerned with hearing.

The fibres from the retina all run along the large lateral root of the optic tracts. The right tract carries the direct fibres from the temporal side of the right retina, and the decussating fibres from the nasal side of the left retina; and the left tract takes the fibres from the left lateral sides of each retina. So that the fields of vision are represented by the tract on the opposite side of the brain, just as they are when all the fibres decussate.

About 80 per cent. of the retinal fibres pass through the lateral geniculate body; the other 20 per cent. go to the nucleus of the pulvinar of the optic thalamus. A few pass to the superior colliculus of the corpora quadrigemina; the connexion is made through the brachium superius which runs under the pulvinar; these fibres are afferent tracts for the pupil reflexes from the retina. The brachium also carries corticifugal fibres from the occipital lobes, and the optic radiations to the corpora quadrigemina and thence to the oculo-motor nerves.

The geniculate fibres are directly associated with vision. Those that pass through the pulvinar (which is closely allied in structure, and probably in function, to the geniculate body) do not go with the others to the calcarine area; they have no doubt some special function connected with sight, but they pass independently to other centres; some of them probably go to the neighbourhood of the angular gyrus.

Degeneration of the pulvinar, if the geniculate bodies are intact, does not produce hemianopsia.

The upper half of the external geniculate body seems to correspond with the upper quadrant of the retina.

The axis processes from the optic tracts and lateral geniculate bodies traverse the posterior end of the internal capsule at the junction of its superior and inferior laminae behind the lenticular body, and then pass directly backward as the optic radiations towards the occipital lobe. They run along the outer wall, roof, and floor of the posterior horn of the lateral ventricle, and end in the nervous felt work of the occipital cortex along the calcarine fissure.

The occipito-thalamic radiations consist chiefly of "corticipetal fibres" for sight, but corticifugal fibres also pass along them to the superior brachium and quadrigeminal colliculus, and thence to the oculo-motor nerves. By Campbell these corticifugal fibres are thought to be the axones of Meynert giant cells in the occipital cortex.

If the visual region of the occipital cortex is removed on one side the lateral geniculate body of the same side undergoes atrophy, particularly in the cells. The pulvinar does not seem much altered.

If the eyes are extirpated the tract undergoes atrophy in the grey matter between the cells, but the cells themselves are not affected.

Lesions of the retina cause degeneration in the intercellular grey matter of the geniculate body, which is mainly composed of ramifications of the retinal fibres.

The visual path has its anterior neurons running from the retinal elements to arborize in the cells of the external geniculate bodies, and from them the posterior neurons run on to the nerve cells in the occipital cortex in and around the calcarine fissure. It is, therefore, not the retinal fibres but the fibres of the external geniculate body that are projected upon the occipital lobe.

Development.

In the third month the "hemisphere vesicle" becomes indented, forming three primary fissures—the choroidal, the Sylvian, and the hippocampal. The hippocampal begins near the frontal pole, and extends back until it bends outwards, downwards, forwards, and inwards, into the middle horn of the lateral ventricle forming the hippocampus; at its posterior part it gives off behind two branches the calcarine and the occipito-parietal, of which the latter is only temporary, while the former is permanent and produces the calcar avis. During the sixth month, among other secondary sulci the permanent occipito-parietal is formed; and also the collateral fissure, the only true secondary fissure which forms the eminentia collateralis.

The Visual Cortex.

The calcarine fissure, which in man commences a short distance behind and below the splenium, was first well described by Cunningham. It consists of an anterior part or "stem," the "true calcarine fissure," which protrudes into the posterior horn of the lateral ventricle as the calcar avis. The fissure as it passes backwards appears to bifurcate into the posterior or "retrocalcarine," and the occipito-parietal fissures; really, however, the latter is separated by the annectant cuneal gyrus, and the former by the deep anterior annectant cuneo-lingual gyrus. The posterior calcarine itself also seems to bifurcate behind into an upper and lower vertical fissure, the "fissura extrema" or "terminalis," but it is really separated from them by the posterior annectant cuneo-lingual gyrus.

If sections are made through the cortex of the occipital lobe, there is seen running across the calcarine fissures

and parallel to the grey matter which covers the surface of the lobe, a well-marked easily seen white line. The line is due to the presence of a special plexus of nerve fibre, running in the cortex and traceable for a considerable distance within its deeper surface. This is known as the line of Gennari.

Elliot Smith has most carefully described its distributions; it stops abruptly and can be readily traced and the area over which it passes can be easily identified. It runs in the grey substance of the occipital lobe following the sulci and convolutions, and by means of its presence the area concerned in vision can be accurately mapped out. Though it appears as a line in sections of the brain, it is really of course a layer of special tissue, which forms part of the thickness of the cerebral grey matter, and lies half-way between the surface and the underlying white matter of the brain. At the retrocalcarine fissure it is seen to line the hollow and both sides of the sulcus, and it reaches upward on the cuneal gyrus, and downward on the lingual gyrus, as far as the two small sulci which run nearly parallel to the retrocalcarine, namely, the "sulcus limitans superior" above, and the "sulcus limitans inferior" below; these meet together in the pole of the occipital lobe, and bound the area striata at that part. It is only prolonged a little to the posterior lateral surface of the hemisphere around the tip of the occipital lobe. Here it is strictly bounded by the sulcus lunatus, which is itself free of the striate tissue. The area of cortex which it involves is called by Elliot Smith the "area striata." This is the "visuo-sensory" area of Bolton, Campbell, and others. The "primordial visual area" of Flechsig.

The structures concerned have been most carefully examined by Campbell, who finds that the special lamination included in the line of Gennari shows its largest dimensions at the forked termination of the posterior calcarine fissure which it surrounds, just reaching the pole of the occipital lobe, and as the length of one or other limb of the fork may be greater or less the extent of the striate tissue will also increase or diminish, not only in length, but in breadth and substance. It spreads forward, bounding the retrocalcarine above and below, involving the cuneo-lingual gyri at either end of that fissure. It spreads definitely below, occupying the lingual gyrus, and it passes forward half-way along the lower border of the true calcarine fissure. Above it is well marked at the back of the cuneus, but anteriorly at the angle where the occipito-parietal sulcus leaves the calcarine it has gradually ceased to exist, and it is not found in the cuneal portion of the annectant gyrus at that part. The occipito-parietal sulcus is quite free of it, so is the gyrus fornicatus. There is no striate tissue along the upper margin of the calcarine proper. Both Campbell and Elliot Smith insist that it is only found along the lower margin. On the other hand the retrocalcarine is extensively and completely surrounded by the stria Gennari both in man and the anthropoid apes. Elliot Smith proposes to call it the medial intrastriate sulcus.

Visuo-Sensory Area.

On microscopic examination special arrangement is found in the visuo-sensory area. The line of Gennari is seen to be composed of a dense network of fibres of fine calibre mingled with some larger fibres which run horizontally and obliquely. There is marked consolidation in the line of Gennari, below it a pale stained area, with the termination of the optic fibres. The external layers of large pyramids are replaced by a layer of curious large triangular or quadrilateral shaped stellate cells, practically distinctive of this region, and found chiefly along the calcarine fissure; they have strong processes of considerable length, which pass horizontally, some of them run obliquely in the fibre plexus.

In the deeper parts of the cortex the internal layer of large pyramids is modified by the presence of a layer of pyramidal cells, the solitary cells of Meynert, another important distinctive feature of the calcarine cortex.

Visuo-Psychic Area.

Outside the visuo-sensory area is a border about 2 cm. in width—the visuo-psychic area. It covers the cuneus above, but not the occipito-parietal fissure nor the upper edge of the true calcarine, though it occupies its lower border almost in its whole length. It passes over the back part of the collateral fissure and round the occipital lobe, rejoining the cuneus above. The gyrus fornicatus does not seem to be a part of the substratum of vision.

The visuo-psychic region shows peculiarities in the histological structure; fine fibres are numerous, but they are not collected together as in the line of Gennari, nor is there the pallid zone underlying it.

The external layer of large pyramids reappears, and none of the peculiar stellate cells remain; but, on the other hand, some of the pyramids are much enlarged into giant cells, with several roots below and one very long drawn-out process above. These cells are the most characteristic elements of the layer. The large cells of Meynert are not found. The very great number both of cells and of fine fibres in this area suggests a high degree of functional activity, and through it are probably transferred the impulses received from the parts around the calcarine to further districts in the brain where the higher attributes of sight are located.

Dr. Mott, in his interesting Bowman Lecture on the progressive development of the visual cortex, shows how the width and complication in structure of the cortex gradually increases as we ascend the animal series and how the special cells become more necessary. Thus, in the hedgehog, in addition to polymorph and small stellate cells are found occasional large pyramids. In the rabbit there is a line of Gennari, large stellate cells, and branching pyramids. Ungulates have a well-marked line of Gennari and numerous solitary cells of Meynert. In the cat there are numerous cells of Meynert, but the most striking feature is the depth of the pyramidal layer; these pyramids are also well developed in the cervical region of the cord, and Mott suggests that they lie along the volitional path of the executive faculty which is exercised through the fore limb and with the help of binocular vision. The depth of the pyramidal layer increases after birth. Dr. Mott considers that the progressive development of the pyramidal layer in the visual cortex of mammals is associated with an increase in the perfection of binocular vision.

Flechsig has shown by preparations of the fetal brain how the development of different parts of the visual area takes place. He considers that as there are many degrees of functions, so the nerve fibres develop as they are required—the sensory found at birth, the motor found soon after birth, and the associated, which gradually develop.

Thus, at birth only a portion of the fibres in the optico-thalamic radiations have acquired their myelin investment. All those that have done so come from the lateral geniculate bodies, and they go direct to the calcarine fissure. Those fibres that come from the pulvinar appear to be medullated later in life and to pass outside the immediate limits of the calcarine area. Medullation of the fibres in the cortical areas occurs at different times. Thus an infant very soon sees light, but does not show that it sees an object held in front of it for some weeks, while it takes him as many months to turn his eyes to follow an object held at his side, or to stretch out his hand to get it.

It is obvious that the highly co-ordinated work that depends on sight is constantly needing the development of new cells and of association fibres throughout life, and they are far more easily acquired in early life.

The visuo-sensory area along the calcarine fissure is the primary station in each hemisphere for the reception of impressions coming from the retina through the geniculate bodies, around it is the visuo-psychic area to which these impressions are transferred, it occupies the rest of the surface of the occipital lobe, its functions are to elaborate and to interpret. If part of the visual psychic area is primarily diseased, there is likely to be a partial hemianopsia complicated by slight peculiarities of vision more or less indefinite, some difficulty in memory of words, some form of letter, word, or mind blindness.

When the fibres that go to the temporal region are affected, there may be word deafness, or loss of power of the musical faculty, to recall names, or to read aloud. The psychic cells are associated with the psychic motor, where the impressions or information gained by sight are transferred for purposes of thought, speech, or action, and these with the emissive motor, by which speech and writing are affected; the centres for these latter acts lie

adjoining those for the simple movement of the lips and hand. The various parts of the visual cortex are connected by short association fibres almost infinite in their distributions.

Adjoining the occipital lobe and continuous with its lateral portion is the angular gyrus, which appears to be a higher visual centre of some importance, probably developed mainly in the left hemisphere. The angular gyrus might be readily associated with the primary visual areas by means of fibres running through the occipital lobe, or with the pulvinar or elsewhere by association fibres.

The central sulcus of each hemisphere separates the motor area (frontal) in front from the sensory area (parietal) behind. The intraparietal sulcus runs upward almost parallel behind the central (inferior and superior post-central); it then turns horizontally backwards parallel to the upper margin of the hemisphere, and terminates in the occipital lobe behind. It separates the post-central region of common sensation and the superior parietal occipital gyri from the supramarginal and angular gyri; these two latter are probably the centres for the recognition of higher, more elaborate forms of sensation and of sight and hearing.

In cases of visual hallucination[1] the angular gyrus is perhaps usually but not always affected. The supramarginal may be the seat of mischief, or the posterior parietal lobule. A case of scar after injury over the region of the angular gyrus on the right side was associated with epileptiform attacks on the left side, preceded with bright red flashes of light and succeeded by visual hallucinations. Mr. Gould trephined with cure.

In a case of Macewen's, in which injury to the side of the head had produced melancholy and homicidal impulses, there was no damage to the outer part of the skull excepting a slight depression behind the angular process of the frontal, which could not account for the symptoms; no motor phenomena were present. It was discovered that directly after the accident, and for some time since, the patient had suffered from psychical blindness. The skull was trephined over the angular gyrus, and a portion of the lateral table was found pressing upon the posterior portion of the supramarginal convolution, a corner of it embedded in the brain. This was removed, with relief to his mental condition.

More distant regions are connected with visual areas by long association fibres, some of which are arranged in well-defined bundles.

The perpendicular fasciculus connects the superior occipital and parietal gyri above with the inferior occipital and fusiform below and with the temporal.

The superior longitudinal fasciculus joins the frontal lobe with the occipital, and, Mott believes, through the large pyramidal cells of the visuo-psychic area.

The inferior longitudinal runs along the outer wall of the posterior and inferior horns of the lateral ventricle, and probably connects sight with hearing, though the fibres may be for projection rather than for association, and connecting the occipital cortex with the optic thalamus. Many fibres connect the neighbourhood of the calcarine with the angular or marginal gyri, and interference with these fibres might produce typical abnormalities in sight.

The fasciculus occipito-frontalis runs below the corpus callosum external to the lateral ventricle, and connects the convex surface of the occipital lobe with many parts of the frontal. The splenium is the commissure of the occipital lobes, and connects one visual area with the opposite occipital cortex.

The occipito-thalamic radiation contains two sets of fibres. The centripetal run towards the occipital cortex to produce vision; and impulses are transferred by the centrifugal from the cortex to the lower parts of the brain to assist the sight by causing movements of the eyes.

Visual Reflexes.

The pupil reflex passes through the lower centres, corpora quadrigemina and third nerve; it is quite unconscious and does not reach the cortex of the brain. But pupil movements are also controlled by impulses centrifugal from the visual cortex through the brachium superius and the quadrigemina.

Many of the simpler and most constant movements that occur in association with sight are automatic, practically reflex, such as involuntary movements starting from the occipital lobes, as in blinking of the eyes, looking towards a sudden light, or to moving objects. Wide movements of the head and limbs are constantly necessary—such as avoidance of obstacles—and become visual reflexes of varying complexity. For them associated fibres run from the visual cortex to the motor centres from which the movements emanate; some of these tracts are in such constant co-operation that the associated movements become a kind of compound reflex action gradually evolved by constant use.

Eye movements intimately associated with the most complex mental activities are most of them involuntary and unconscious; consciousness is alone concerned with the result affected—sleight of hand, billiards, etc.

The visual centres are undoubtedly reached by other afferent impulses than through the eyeball and retina alone. Pupil action and accommodation and muscle sense produced by movements of the eyes in any direction, or in convergence, cause simple impulses towards the brain. Visual judgements also largely depend on impressions from the sense of touch, and as almost every movement of the body is guided by sight, the associations around sight are very wide indeed.

When the sight is lost from defects in the eyeball or optic nerve, almost all other impulses from hearing, touch, muscle balance, etc., are effectual in stimulating a healthy visual cortex, and they become increased in influence to the help of faulty sight. But defect in the visual brain is a much more serious matter, and if the sensory area is damaged by disease, some part of the psychic area is likely to be affected with it.

We cannot overrate our obligations to Ferrier for his early experimental research work on the brain and for drawing attention to the importance of the angular gyrus and of the neighbourhood of the occipital lobe in visual processes, nor to Schäfer, Horsley, and others.

Bolton examined in serial sections the occipital lobe in five cases of old-standing blindness and in one case of anophthalmos. In all he found changes in the cortical area throughout the line of Gennari with marked atrophy of the fibres and of the cells, especially of the large stellate cells. The line was much diminished in thickness, but not absent (perhaps from the presence of fibres running from the occipital lobe through the splenium to the opposite of the brain).

A very important paper published by Dr. Turnbull in *Brain*, 1904, on "Bilateral Loss of Post-central Cortex," described with great detail a case of bilateral cystic degeneration of the occipital lobes and of the neighbouring cortical areas on both sides of the brain, and the consequent absence or deterioration of the optic radiations and optic tracts with the structures associated with them in the sense of sight.

The patient died at 24 years of age, from severe burns, in the London Hospital, January, 1903, under Mr. Moullin. As a baby she was noticed not to follow anything with her eyes; she simply stared straight ahead with them. They were fine eyes, and did not squint. She was taken to Moorfields, and found to be quite blind. The notes then made were, unfortunately, not available after her death.

She was very peculiar and of uncertain temper. Her power of hearing, taste, and smell were very good. She could speak with a limited degree of intelligence. Her powers of locomotion and her common sensations were very imperfect. She never showed signs of seeing anything, never examined anything with her eyes, never watched objects moving about the room.

After death the brain was removed and most carefully investigated. About the posterior third of each hemisphere was found to form a cyst with thinned walls. The cavity included the posterior horn of the lateral ventricle and part of the middle horn. The cortex involved was that of the occipital lobes (excepting a small portion of the lingual lobule), the cuneus and nearly all the precuneus, most of the parietal cortex, and the angular gyrus. The proper structure of the wide area of the visual cortex and its surroundings was completely destroyed.

The posterior part of the corpus callosum was much reduced in size, and the splenium was represented by a mere cord.

(The splenium is the commissure for the occipital lobes, and sends into each a large mass of fibres known as the forceps major, while the tapetum spreads from it over the lateral ventricle. Déjerine had shown that fibres pass in the splenium from the posterior portion of the median surface of the hemispheres, from the occipital pole, from the cuneus, the lingual and fusiform convolutions; and

Ferrier also found that fibres pass from the lateral surfaces, the external occipital convolutions, and from the angular gyrus to the splenium.)

There was no trace of the fibres of the optic radiation, and the retrolentiform portion of the internal capsule from which they pass was extremely atrophied or almost absent. The optic chiasma in front was small and flattened out by pressure from the distended dropsical third ventricle.

The optic nerves and tracts were small. (The small middle root of the optic tract was present; it passes to the medial geniculate body, and by the brachium inferius to the inferior colliculus of the corpora quadrigemina, and is concerned in hearing.)

The lateral root of the optic tract was very small, and the lateral geniculate body through which most of the fibres pass was very much atrophied; no fibres could be traced into it from the retina nor from the brain. The other 20 per cent. fibres of the lateral root were much better defined: it passed upwards to the pulvinar, and to the superior quadrigeminal body. The pulvinar was only very slightly deficient behind, otherwise the optic thalamus seemed well developed, as were also the quadrigeminal bodies, though somewhat compressed. Though concerned in vision these parts are not directly associated with the visual area in conveying impulses for the primary sensation of sight.

Evidence from Post-mortem Examinations.

A very large number of cases of varying types of hemianopsia have been investigated, but the deductions drawn between the faulty area of vision involved and the precise locality of the disease found in the occipital lobe after death are not by any means conclusive or uniform.

Many forms of pathological mischief have caused the changes in the brain tissues. Haemorrhage, gumma, tubercle, softening from embolism or thrombosis, abscess, tumour, etc.

The secondary area involved around the actual lesion is in many of them very wide and irregular, and even when thrombosis or embolism of the calcarine artery or its branches have taken place, the district affected is more or less wide in extent, and changes are produced, not only in parts of the visual cortex, but in the underlying fibres of the optic radiations and in the neighbouring tissues.

A lesion involving the occipito-thalamic radiation anywhere between the passage of the optic fibres from the retrolenticular portion of the internal capsule, or from the lateral geniculate body to the centres in the visual cortex, would produce a hemianopsia varying in degree and permanence according to the position of the fibres involved and the nature of the lesion.

Several cases have been published where the mischief has been limited to some part of the optic radiation, without implication of the cortex. The radiation fibres, without being the primary seat of lesion, may become affected from without, and a hemianopsia may result by their secondary implications where no part of the visual cortex or tracts is itself affected. But in cases of uncomplicated hemianopsia some primary damage on the mesial aspect of the occipital lobe in the neighbourhood of the calcarine fissure has usually taken place.

Sequin[12] collected 40 cases of hemianopsia in which autopsies had been made, and 5 traumatic cases which showed circumscribed lesions in the occipital lobe, cuneus, and neighbourhood; all had hemianopsia, with other symptoms of various detail according to complications. He estimated that the visual cortex centre was on the mesial aspect near the site of the hippocampal fissure.

Dr. Merrell in 1884 published the case of a man aged 57. The fundi and optic discs were normal; central vision good, for his age; perfect reaction of the pupils. But there was hemianopsia of the left side, complete in the lower quadrants and in the periphery of the quadrants above. He was nervous and irritable, otherwise the definite defect was a weakness of memory for names. In 1886 he died, and there was found a well localized atrophy of the cerebral convolutions on the mesial surface, involving the lower half of the cuneus, bounded below by the calcarine fissure and in front by the occipito-parietal. The white matter underneath the damaged cortex was softened to a depth of about one-third of an inch. No other part of the brain or visual tract was found to be defective.

Henschen insists that the primary half-vision centre is along the lips and depth of the calcarine fissure, especially of its anterior two-thirds. He considers that the upper and lower quadrants in the visual field (lower and upper parts of the retina) are associated with the structures that occupy the ventral and dorsal areas respectively of the calcarine fissure. The dorsal part of the visual cortex, the cuneal lobe, and dorsal portions of the optic radiations are concerned with the lower quadrants of the field of vision, while the upper quadrants of the visual field are associated with the lingual and fusiform lobes, and the ventral boundary of the calcarine fissure and the optic radiations associated with them.

In a case of complete hemianopsia under his care there was found in the opposite occipital lobe softening produced by thrombosis. It was confined to the cortex along the calcarine fissure, lying deep in it, and giving rise to slight secondary degeneration of the optic fibres beneath.

Wilbrand states that the lower lip of the calcarine corresponds with the upper quadrants of the visual fields.

Hun's Case (Amer. Jour. Med. Sci., January, 1887).

A man, aged 57, was suddenly seized with slight cerebral symptoms. The fields of vision showed a complete left lower quadrant bilateral hemianopsia, the upper left quadrant being also slightly narrowed at the periphery, the charts of vision did not alter for nearly two years. . . . Then he died. There was found on the mesial surface of the occipital lobe a localized atrophy involving the lower third of the cuneus, bounded below by the calcarine fissure, and in front by the parieto-occipital.

In other cases such definite division cannot be made out. A thoroughly reliable case of quadrantic hemianopsia was published by Drs. Beevor and Collier.[2]

A patient, aged 55, was under their observation for nearly two years during which his illness lasted. Careful perimetric observations were repeatedly taken, and a most thorough examination and exhaustive report was made of the brain structures after death. His only general symptoms were numbing of the left hand and arm, severe recurring occipital headache and faulty eyesight, and at long intervals two or three fits. The optic discs were pallid, and there was some sclerosis of the retinal arteries.

His central vision was $\frac{6}{9}$ in either eye; he was completely blind in the upper left quadrant of both visual fields, with some general narrowing of the fields. For two months or so before he died his health failed rapidly and his sight got worse.

There was found occlusion of the right posterior calcarine artery, with destruction of the visual cortex involving the whole depth of the calcarine fissure, together with the right lingual lobe and the fusiform lobe below it.

The optic radiation was not involved in the necrosis. So far we should expect the defect that was actually found in the visual field.

But there was in addition damage to the lower third of the cuneal gyrus and the adjoining retrocalcarine fissure; this latter area, if Henschen's view is correct, should have caused defect in the lower quadrants of the visual field, which in this case were only slightly implicated. Mott, on examining the sections, found a patch of healthy striate cortex along the upper lip of the calcarine and in the adjoining surface of the cuneus which he thought accounted for the retention of vision in the lower fields.

Again, by far the greater part of the disease lay in and around the lingual lobe, but the defective field area is not confined to the upper quadrants; it shows definite narrowing of the lower fields as well. Besides, it would seem possible that the upper part of the cortical lesion came later in the disease, after the patient was too ill for further perimetric testing, and when possibly the lower quadrant had become defective from the cuneal disease above. The cortex lining the calcarine fissure was necrotic, and yet the hemianopsia was not complete. Can the calcarine, then, be looked upon as the primary half-vision centre? For there was not complete hemianopsia in this case. We must admit the importance of considering, not only the amount of mischief done in the cortex, but also the extent to which the radiation fibres are affected. For, as the author suggests, there may be considerable overlapping in the cortical supply of the various parts of the retina, and considerable power of compensation for local damage in the cortex limiting the lesion.

It seems to me probable that the centre for complete hamianopsia lies more anteriorly in the optic radiation near the calcarine proper, rather than in the post-calcarine, which was the sulcus here implicated, or else that the optic radiations must be involved when the hemianopsia is complete; and I suggest that the further forward towards the splenium the mischief is the greater the number of fibres likely to be involved and the wider the hemianopsia, while the more posterior the lesion the more numerous the

subdivisions of the artery, and the more localized the area of faulty blood supply is likely to be and the smaller the defect in the field.

Many cases are not so well defined as these, but a quadrant defect more or less complete in the fields of vision is not infrequent. The defect may be only slight and partial, or it may approach towards a complete hemianopsia by implication of the adjoining vertical quadrant, or it may be irregular.

It must be admitted that the sense of sight is an extremely complicated physiological process, especially in man, while the lesions made by pathological changes are very rarely sufficiently localized to provide for a fine subdivision of physiological values of the different portions of the visual area. But we have ample data from *post-mortem* examinations to be certain on general lines that the visual field is primarily represented on the mesial surface of the occipital lobe along the calcarine fissure. Moreover, it is probable that the area of cortex above and below the fissure respectively represent the lower and upper quadrants of the field.

In Foster's case of bilateral hemianopsia there was symmetrical damage of the mesial surface of both occipital lobes, and fibres internal to and below the lateral ventricle, including the inferior longitudinal bundle, were destroyed. The apex of the cuneus and hinder end of the calcarine were left intact. In this case the central macular vision was maintained.

An important means for localizing intracranial mischief is the use of the perimeter to ascertain the condition of the visual field and its defects.

It is certain that hemianopsia may occur without being necessarily an early symptom of further brain trouble. I have seen a number of patients who with more or less defect in the visual fields have been able to do useful work apparently without discomfort, and who have remained without any other evidence of disease for many years.

The common cause in localized cases is, I expect, embolism of some twig of the calcarine artery. The onset is usually sudden, the patient has slight brain disturbance for some days, and then recovers. The obstructed area undergoes atrophy and causes the patient no discomfort except his loss of localized visual area.

But hemianopsia may be a part of a spreading lesion, the first symptom of a thrombosis which will lead to a progressive softening, or of a commencing tumour, which causes pressure upon some part of the visual cortex or radiations, or upon the optic tract. Increase in the size of the morbid growth will probably cause increased defect in the visual field, as well as more vascularization or swelling in the optic nerve.

Trephining, made safe by antiseptics, may be necessary in primary injuries, for fracture, abscesses, haemorrhage, and discharging cortical areas in epilepsy. Cysts may be relieved and old gummata removed. Cases of tumour will die if not interfered with, and though some may be malignant and too deep for removal, still others may be on the surface and more easy than might be expected, while, on the other hand, necropsy may show that operation would have saved the patient.

For the study of the blood supply to the brain structures concerned in vision, I would refer to the splendid work of Dr. Beevor.

A simple summary may here be given. The optic chiasma and nerves are supplied by the posterior communicating and the anterior cerebral arteries. The anterior choroidal artery, which ends in the choroidal plexus of the lateral ventricle, supplies the optic tract, the posterior portion of the internal capsule, especially its retrolenticular fibres, and the origin of the optic radiations. The chief artery for supply, however, is the posterior cerebral; it assists in forming the choroidal plexus, it supplies the corpora geniculata, the corpora quadrigemina, the pulvinar, the fornix and the splenium, with the anterior portion of the optic radiations, though not quite up to their origin.

The mesial surface of the occipital lobe is entirely supplied by the posterior cerebral, which terminates in two branches, the occipito-parietal and the calcarine; they go to the lingual and cuneate gyri, the fusiform and gyrus quadratus, the pole of the occipital lobe and other parts of the visual cortex. The outer surface of the occipital lobe with the angular and supramarginal gyri are supplied by the middle cerebral. There is a very free anastomosis between these vessels, so that a faulty circulation due to embolism of one artery should be readily restored by means of the other.

The posterior part of the radiations are supplied according to their proximity to the cerebral cortex, the dorsal and outer layers by the middle cerebral artery, the inner and ventral layers by the posterior cerebral.

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SOME OBSERVATIONS ON PREPARATIONS OF LACTIC ACID BACILLI AND THE PRODUCTION OF SOURED MILK.

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THE administration of lactic acid bacilli promises to find a permanent place in therapeutics, and I have thought that the results of some experimental work voluntarily undertaken for the benefit of medical practitioners with whom I come in personal contact might not be without interest to others.

For a starting point I selected four "brands" of lactic acid bacilli (two English and two Continental) which appeared to find most favour; I also obtained a milk culture. These were all simultaneously incubated at 105° F. for ten hours and afterwards allowed to remain for twelve hours, when the following results were recorded, one tablet having been added to each half pint of milk, which had previously been boiled for a few minutes, then allowed to stand for thirty minutes and the layer of fat removed.

Sample.	Physical Characters after Incubation.	Production of Acid calculated as Lactic Acid *B.P.*
		Per Cent.
1. English tablet ...	No curd; slight sour taste	0.42
2. Continental tablet	No curd; slight sour taste	0.24
3. Continental tablet	Slight curd; not "soured"	0.07
4. English tablet ...	Moderately good curd; bitter taste	0.12
5. Milk culture ...	Firm curd, with refreshing acidulous taste (curdling appeared in four hours)	2.34

The tablets were first powdered and triturated with a small quantity of sterilized water, when Nos. 1 and 2 were found to possess an acid reaction, and Nos. 3 and 4 were neutral. The milk culture (No. 5) was strongly acid.

From the product obtained by means of the milk culture some tablets were prepared by carefully drying the curd, mixed with its own weight of milk sugar, at a temperature not exceeding 100° F.; the tablets thus prepared were excellent pharmaceutical specimens, producing a satisfactory curd and in lactic acid content comparing favourably with the tablets previously examined.

YIELD OF LACTIC ACID.

Attempts were made to extend the period of incubation, but the results, from a dietetic point, were not satisfactory, especially when starting with the small quantity of bacterial substance contained in one tablet; after twenty-four or thirty-six hours there was great liability for butyric fermentation to set in, and the milk became less palatable; but by taking a larger amount of material, as was possible in the case of a culture, a high lactic acid content was soon reached and secondary fermentation did not occur.

Culture Tested Daily for Acidity.

After one day's incubation	...	2.28	per cent.	lactic acid,	*B.P.*
„ two days' „	...	2.58	„	„	„
„ three „	...	3.48	„	„	„
„ four „	...	4.56	„	„	„
„ five „	...	4.56	„	„	„

It was assumed that acid production, or bacterial activity, terminated as a result of the lactose (milk sugar) contained in the milk having all become converted into lactic acid. To ascertain if the addition of lactose would accelerate acid production, two cultures were made, (*a*) containing two tablets in 100 c.cm. of milk, (*b*) containing two tablets in 100 c cm. of milk, with the addition of 4 grams of lactose; after seven days' incubation at 100° F., the amount of lactic acid produced in (*a*) and (*b*) was found to be identical—namely, 3 12 per cent. in each sample. It therefore appears that the addition of milk sugar was unnecessary.

Another question was, Does the curd or the whey contain the greater proportion of acid? A sample of soured milk was examined, in which no separation of casein had occurred; it was afterwards heated in a flask or a water bath for a few minutes, until coagulation had taken place, for a sufficient quantity of whey to be obtained, and the estimation of the acid in both instances was found to correspond exactly.

EFFECT OF TEMPERATURE.

With a view of ascertaining the optimum temperature for the lactic acid organism, a sample of milk treated with the bacillus of Massol was divided into three parts, and the following results were obtained in the same length of time:

Temperature.		Amount of Lactic Acid *B.P.*
80–90° F.	...	1.44 per cent.
90–100° F.	...	1 68 „
100–110° F.	...	2 28 „

These results were practically confirmed by tests with the tablets which I had prepared; one tablet in half a pint of milk gave—

Incubated below—		Lactic Acid *B.P.*
100° F.	...	0.12 per cent.
105° F.	...	0 26 „
110° F.	...	0.72 „

I consider the disappointments which have been expressed in the preparation of sour milk are due (1) to employing insufficient bacterial substance, (2) to inefficient temperature. Some popular forms of apparatus on the market are heated by means of a night-light, and the temperature produced with night-lights from the same box has been found to vary 15° F. To obtain the best results a moist culture is recommended and cultivating for at least four hours between 105° and 110° F., the growth of adventitious organisms is thereby inhibited, and an amount of lactic acid quickly produced to retard their subsequent development.

NOTE.—It was found that the milk heated for ten hours at 105° F. gave a reaction to phenolphthalein, which corresponded to 0.048 of lactic acid *B.P.*, and this amount has been deducted in the results above recorded.

AN international Medico-Psychological and Psycho-Therapeutical Association was recently founded at Salzburg on the initiative of Professor Forel, Dr. Oskar Vogt, and Dr. L. Frank, and other well-known neurologists. The president is Professor Raymond, of Paris; the vice-presidents, Professor Forel and Dr. Oskar Vogt, of Berlin.

THE Royal Dental Hospital of London being burdened with a mortgage of £42,086 appeals for donations and subscriptions to maintain the hospital in its present state of efficiency, for which a sum of £3,000 a year is required, in addition to £2,759, a compulsory yearly payment for the redemption of the mortgage. The number of operations performed in 1908 were 109,659, and of these anaesthetic cases numbered 50.050. The secretary is Mr. J. Francis Pink.

LEUCOPLAKIC VULVITIS AND ITS RELATION TO KRAUROSIS VULVAE AND CARCINOMA VULVAE.

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THE occurrence in the tongue of a peculiar type of inflammation, leading on to a leucoplakic condition of the mucous membrane and terminating in carcinoma, has long been known.

It was first described in 1869 in the *Transactions of the Clinical Society* by John Whittaker Hulke, the Council of the Royal Medical and Chirurgical Society having refused to publish his paper some four years previously. Sir Henry Morris described the second case, and also was the first to call attention to the frequency with which a similar type of inflammation preceded carcinoma of the vulva, and operated upon several patients with the combined disease. Both of these eminent surgeons were acting members of the Middlesex Hospital surgical staff, a matter of great interest to the authors of this paper.

It is remarkable that a clinical observation of such importance should have attracted so little attention, especially by gynaecologists, and that the only two English writers who have subsequently drawn attention to the subject, namely Bland-Sutton and Butlin, should both be general surgeons.

The relation borne by leucoplakic vulvitis to carcinoma is closer than that of any other pathological lesion with the exception of the entirely modern *x*-ray dermatitis. In 1885 Breisky drew the attention of gynaecologists to a disease which he named "kraurosis vulvae." His description led to much confusion, for whilst he undoubtedly described a till then unrecognized condition, subsequent writers on the subject down to the present time, as can be seen from the textbooks, appear to have confused the conditions of leucoplakic vulvitis and kraurosis vulvae, and to have considered them different phases of one and the same disease.

In this paper, then, we shall proceed to show that leucoplakic vulvitis and kraurosis vulvae are two distinct diseases, and we shall then pass on to consider the relation borne by the former to carcinoma of the vulva.

LEUCOPLAKIC VULVITIS.

Definition.

Leucoplakic vulvitis is to be defined as a chronic inflammatory condition of unknown origin characterized in its early stages by marked hyperaemia and cellular activity, and in its later phases by marked epithelial hypertrophy and a thickened, sclerosed, and retracted condition of the subepithelial tissue.

Distribution.

Its distribution varies with its severity and time of incidence. In a well-marked case the whole of the vulva may be implicated with the exception of the vestibule and orifice of the urethra, which are never affected; and not only may the labia majora, minora, anterior and posterior commissures and the clitoris suffer, but the disease may even spread laterally to the folds of the thighs and posteriorly over the perineum and skin surrounding the anus

Signs.

Clinically, leucoplakic vulvitis may be divided into four stages, according to the macroscopical features which it presents. In the first stage the parts affected have a reddened, swollen, and excoriated appearance, and their surface is dry.

In the second stage, whilst the labia minora decrease in size and may even become mere ridges, there is a subepithelial thickening, so that the parts can be said to have undergone "retraction with thickening." The colour of the affected area now changes from red to white of a

semi-opaque character. This opacity becomes intensified in patches at first and later on over the whole of the diseased surface; from the white appearance resulting the disease obtained its name of leucoplakia of the vulva.

In the third stage, where the disease is most marked, cracks and ulcers may make their appearance, the ulcers giving rise to a slight discharge, and bleed sometimes when touched. At this stage carcinoma quite commonly becomes engrafted on some portion of the diseased area, and as a rule it commences in the ulcer or fissure. If the patient escapes the incidence of carcinoma a fourth and final stage supervenes, in which the vulval surface is smooth, shiny, and white, and the labia minora and clitoris practically disappear, owing to the contraction of the subepithelial tissues, and the disease becomes quiescent.

Symptoms.

The striking and often the only symptom of leucoplakic vulvitis is pruritus, which is peculiarly intense in the first and second stages. In the third stage the pruritus is more or less masked by the pain and acute sensitiveness due to the exposure of the nerve endings in the floor of the ulcer or crack. In the fourth stage the symptoms disappear and the patient ceases to complain. If carcinoma supervenes at the third stage the ulcers become very painful and

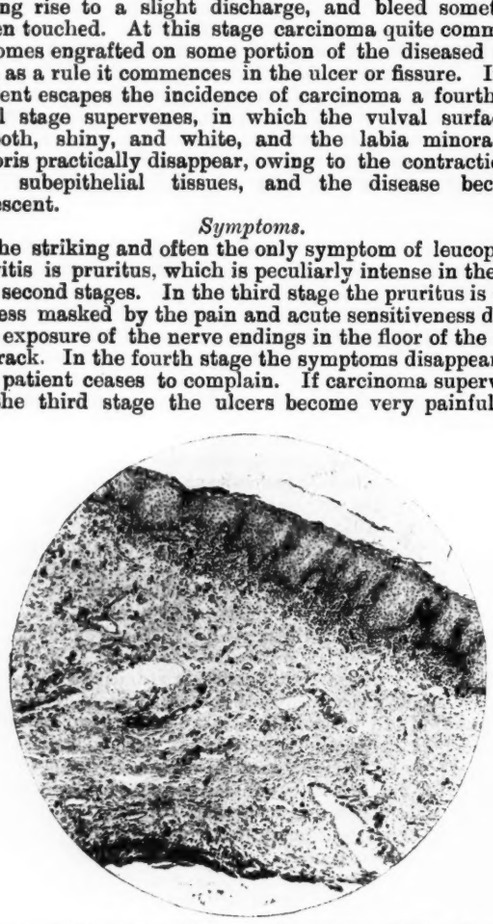

Fig. 1.—Earliest stage of leucoplakic vulvitis. Surface desquamation of epithelium and diffuse subepithelial lymphocytosis.

tender, bleed easily on being touched, become hard and indurated in spite of local treatment, and enlarge fairly rapidly.

Pathology.

The pathology of leucoplakic vulvitis may be conveniently divided into stages. Such a division, however, bears no reference to duration, but is governed solely by the histological features which the diseased tissue presents. It is necessary to emphasize this, because different parts of the diseased area may be respectively in different pathological stages at the same time.

From a study of a great number of sections obtained from 24 cases operated upon by us, it has been possible to construct an account of the full gamut of histological changes which characterize the disease from its initiation to its subsidence.

In the first stage the epithelium is swollen and the individual cells less firmly attached to one another, so that the desquamation of the superficial cells is excessive. The subepithelial tissue is abnormally vascular and is crowded with lymphocytes, some of which have intercalated themselves between the cells of the basal layers of the epithelium. Few or no polynuclear leucocytes are to be seen, and the fixed tissue cells of the part have not proliferated (Fig. 1).

In the next stage the type of the subepithelial tissue cell proliferation begins to alter. Lymphocytes are still conspicuous objects, but besides these are groups of plasma cells and an increased number of large hyaline fixed connective tissue cells normal to the part. The sustentacular elements become altered, the white fibres become decollagenized and more hyaline in appearance, whilst the elastic fibres have in many places completely disappeared over a certain subsurface area, so that a definite zone of de-elasticized and hyaline looking tissue intervenes between the epithelium and the normal tissues deep down (Fig. 2).

That many or all of the lymphocytes seen in the microscopic field are produced in the diseased area is proved: (1) By the absence of these cells in the cross sections of blood vessels, and (2) by the appearance at this stage of definite new lymph nodes (Fig. 2) in the subepithelial tissue, which contain germinal areas showing karyokinesis, and are not normally present there. The appearance of these new lymph nodes is very interesting, because they are commonly found in the neighbourhood of carcinoma, to which disease the condition under discussion bears, as already stated, a very close relation.

The origin of the plasma cells is undoubtedly local. They appear to be developed from certain elongated nuclei found in resting connective tissue. The large hyaline fixed tissue cells proliferate both mitotically and amitotically from similar cells normally found in the part, and the same may be said of endothelial cells. One of us has lately discussed fully the origin of these various groups of inflammatory cells.[1]

The epithelium at this stage is markedly hypertrophied, and many karyokinetic figures can be seen in it. The

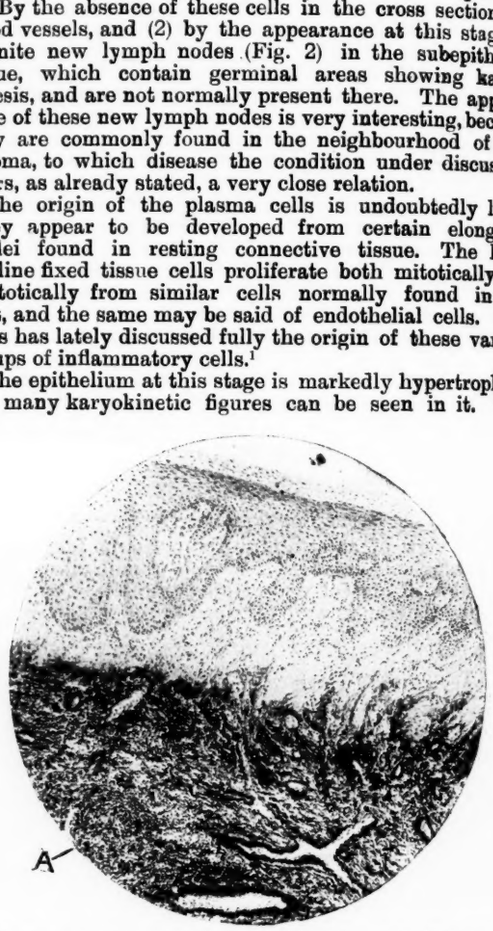

Fig. 2.—Second stage of leucoplakic vulvitis. A hyaline zone of the elasticized tissue underlies the epidermis; beyond this area are shown the elastic fibres (stained darkly) which are normally found in the connective tissue. The interpapillar epithelial processes are elongated. A new lymph node is seen embedded amongst the elastic fibres at A.

hypertrophy is chiefly of the basal layers, and the interpapillar processes of the epithelium are much elongated. The surface cells, on the other hand, still show a tendency to early desquamation, which reaches its maximum in the numerous shallow ulcers and fissures that beset the diseased area. At these points so great has been the shedding of the superficial epithelium that the apices of the elongated papillae of the corium almost reach the surface. It is also noteworthy that the inflammatory cells already described, and particularly the lymphocytes, tend to aggregate around the tips of the interpapillar epithelial processes.

In the third stage the cellularity of the subepithelial tissue begins to give place to fibrosis. Many of the inflammatory cells, disappear, collections of lymphocytes and plasma cells are still scattered over the field. A redeposit of collagen occurs around the fibroglia fibres of the fixed tissue cells, which in the preceding stage have been greatly increased in number, so that the tissue from being unduly rarefied now becomes denser than normal. The hypertrophy of the epithelium is still maintained, but the growth tendency now appears to be directed upwards, resulting in the formation of a dense mass of keratinized squames, whilst the interpapillar downgrowths are disappearing, so that the epithelium rests on the sclerosed subepithelial tissue more as a flat sheet. There is a total absence of yellow elastic tissue in the sclerosed subsurface zone (Fig. 3).

In the final stage the sclerosis of the subepithelial tissue is complete. Very few cells are to be seen under

the epidermis. Such as are present are of the fixed connective tissue type. The subepithelial zone of de-elasticized tissue is of less depth, but denser. The epithelium, probably starved by the increasing fibrosis going on underneath it, becomes thinner, whilst the cells show an early tendency to keratinization (Fig. 4).

Clinically at this stage the disease is quiescent. The surface of the vulva is smooth and shiny white in appearance, and the elevations of the labia minora and clitoris have become flattened down almost to disappearance owing to the contraction of the subepithelial tissue. Pruritus has ceased, and the patient ceases to complain.

KRAUROSIS VULVAE.

We have now to contrast leucoplakic vulvitis with kraurosis vulvae. Since Breisky's original paper the most perfect clinical description of this latter disease is that of Thiberge,[3] with whose conclusion we are in complete agreement. Kraurosis vulvae consists of an atrophic condition of the vulva, associated clinically with stenosis of the vaginal orifice, and pathologically with certain changes in the dermis.

Distribution.

The labia minora, vestibule, orifice of the urethra, and that of the vagina are always affected, the hood of the clitoris sometimes. The skin on the outer surface of the labia majora between the labia majora and folds of the thigh covering the perineum and surrounding the anus is never affected.

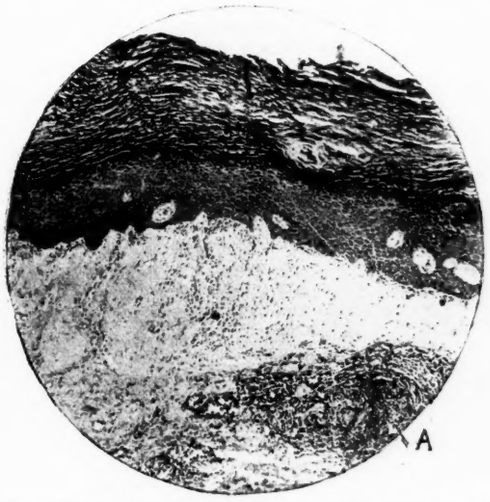

Fig. 3.—Third stage of leucoplakic vulvitis. The superficial epithelial cells have undergone extensive hypertrophy and keratinization. The interpapillar epithelial processes are atrophying, owing to the subepithelial fibrosis which has taken place. A new lymph node is seen at A.

Signs.

Kraurosis vulvae may be divided into two stages. In the first, the muco-cutaneous surface is red, glistening, and shiny, whilst dotted over it here and there, but more particularly on the hymeneal remains round the vaginal orifice, may be seen isolated patches, varying in size from that of a pin's head to half a split pea, and in colour from that of a bright red to a dull purple. In addition, a caruncular condition of the urethral orifice is very often present.

In the second or final stage the muco-cutaneous surface becomes pale yellow and glistening, "recalling the colour as well as the aspect of the surface of a fatty liver, particularly that of a goose such as we see exposed for sale in a provision shop." The muco-cutaneous surface is perfectly smooth, all the ridges having become obliterated. The vaginal orifice has contracted so that perhaps only with difficulty can a digital examination be made, the labia minora and clitoris disappear, the mons veneris atrophies, and the pubic hair becomes brittle and breaks off or falls out. In this disease, though marked shrinkage occurs in the mucous membrane, yet in contradistinction to leucoplakic vulvitis, owing to the absence of epithelial and subepithelial hypertrophy, the condition may be termed one of retraction with thinning.

Symptoms.

The principal symptoms complained of are those of soreness and pain, together with dysuria and dyspareunia. It is very worthy of notice that whereas in most textbooks pruritus is stated to be one of the constant symptoms of kraurosis vulvae, it is in reality one of the rarest; and that whereas dyspareunia as a symptom is only lightly touched upon, it is in reality the trouble mostly complained of. At least this has been our experience, which also corresponds with that of Thiberge, who remarks in his masterly essay on the subject, "the functional symptoms of kraurosis vulvae are of an exclusively mechanical order."

In the first stage of the disease the parts are extremely sensitive, the passage of urine gives pain, and coitus, for the same reason, is hardly endured or is impossible altogether.

In the second stage the soreness may entirely disappear, but, owing to the retraction of the vaginal orifice, dyspareunia becomes common to both parties.

Pathology.

The microscopical appearances of kraurosis vulvae are quite unlike those of leucoplakia. The epithelium is everywhere thinner than normal, and the papillae and interpapillar processes are atrophic and in places have altogether disappeared. The subepithelial connective tissue exhibits marked cellularity but of a patchy kind. In the areas of a section which correspond to the red patches seen in the surface of the mucous membrane a very large, in places even massive, proliferation of plasma cells is seen immediately under a thinned and flattened epithelial layer. Surrounding the plasma cell proliferation or partly mixed with it both lymphocytes and polymorphonuclear lymphocytes are seen. The lymphocytes are the more deeply placed, and as the surface is approached the polymorphonuclear leucocytes become increasingly predominant. In the rest of the section simple thinning of the epithelium is manifest with a certain number of polymorphonuclear leucocytes, lymphocytes, and plasma cells in the connective tissue which underlies it. One of the most striking features, perhaps, is the intercalation of polymorphonuclear leucocytes between the epithelial cells. When stained for elastic tissue the sections show that this is present in all parts, save where massive accumulations of plasma cells have occurred. A comparison of these histological appearances with those described as occurring in leucoplakic vulvitis will show that the pathology of the two diseases is quite different (Fig. 5).

Fig. 4.—Final stage of leucoplakic vulvitis. The epithelium is thinner than normal; early keratinization of the surface cells is occurring. The subepithelial tissue is diffusely sclerotic.

Etiology.

Various causes have been assigned to kraurosis vulvae, such as leucorrhoea, syphilis, sexual abuse, age, and operations upon the genital organs necessitating the removal of the ovaries.

Jayle's classification is as follows:

1. Leucoplakia or white kraurosis (simple, syphilitic).
2. Inflammatory or red kraurosis (follicular or vascular).
3. Senile kraurosis.
4. Post-operative kraurosis.

In our experience only the last two factors have any part in the etiology. In the light of our investigations, this classification must be considerably modified. White kraurosis is undoubtedly a misnomer for leucoplakic vulvitis. Red kraurosis is the first stage of the changes we have described under the heading of this disease. The terms senile and post-operative kraurosis are merely an indication of the cause, and have no place in a classification founded on pathology.

Whilst the changes producing kraurosis vulvae are undoubtedly in a large measure inflammatory, yet there is another factor in its production which is of signal importance. The cases may be divided into three groups:

1. Those in young women associated with sterility.
2. Those occurring at or after the menopause.
3. Those occurring after operations involving the removal of both ovaries.

It would appear, therefore, that deficiency or absence of some ovarian factor in the economy of the organism plays a large part in the causation of the disease. We know of no instance in which kraurosis vulvae has been associated with carcinoma of the vulva, and the disease has in our

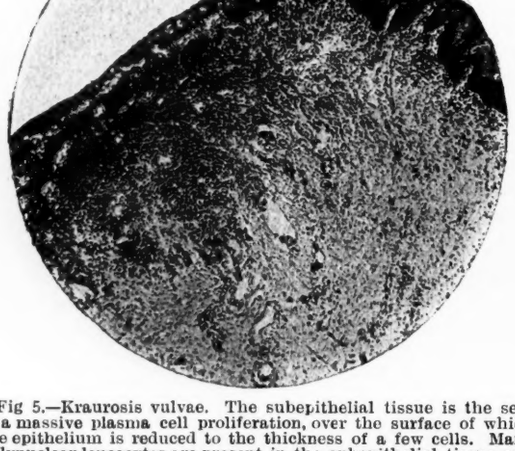

Fig 5.—Kraurosis vulvae. The subepithelial tissue is the seat of a massive plasma cell proliferation, over the surface of which the epithelium is reduced to the thickness of a few cells. Many polynuclear leucocytes are present in the subepithelial tissue and intercalated between the epidermal cells.

opinion no relation to it, in this way markedly differing from leucoplakic vulvitis, which, as we will now proceed to show, is very closely connected with cancer in this situation.

Relationship between Leucoplakic Vulvitis and Carcinoma of the Vulva.

The following statistics deal with 58 cases of carcinoma of the vulva and 19 of leucoplakic vulvitis that have been admitted to the Middlesex Hospital and Chelsea Hospital for Women during the last ten years.

Age.

The average for carcinoma was 59; that for leucoplakia 51. The oldest patient with carcinoma was 81, and the youngest 40; the oldest with leucoplakia was 70, the youngest 26.

Civil State.

In carcinoma 58.6 per cent. were married women, 25.8 widows, and 15.6 single women; whilst in leucoplakic vulvitis 63.2 were married, 21 widows, and 15.7 single.

Parity.

In the carcinomatous cases 48.2 per cent. were sterile, and in leucoplakia 47.5. Of those women who were not sterile, the average number of pregnancies in both diseases was seven.

Pruritus and Leucorrhoea.

Of the carcinomatous patients, 36 per cent. complained of pruritus, and 13 per cent. of leucorrhoea; whilst 63 per cent. of the patients suffering from leucoplakic vulvitis complained of pruritus, but none of leucorrhoea.

Etiology.

As we have already indicated, leucoplakic vulvitis is in our opinion an antecedent condition and the cause of carcinoma of the vulva.

What is the cause of leucoplakia is a much more difficult question to decide; it has really never been determined. It cannot be due to a leucorrhoea, because in the first place the age does not correspond with the commonest period for leucorrhoeal discharges; secondly, the disease never attacks the vagina, which canal should certainly be affected if this was the cause; and, lastly, in our experience of leucoplakic vulvitis leucorrhoea has been absent. When one comes to consider the civil state of the patients it is seen that 84.4 per cent. of carcinomatous cases and 84.2 of the leucoplakic are or have been married; whilst with respect to parity both conditions are very similar, about 48 per cent. of the women being sterile, and of those who were not 7 was the average number of pregnancies in each.

Lastly, we see that the average age for both diseases is over 50.

Leucoplakic vulvitis is evidently due to some damage to or interference with the resisting power of the surface epithelium of the labia, and although coition as a cause of this cannot be insisted upon in every case, it seems to be one

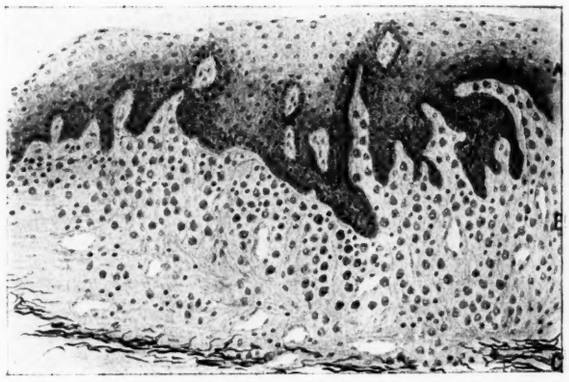

Fig. 6.—The earliest stage of the squamous cell carcinoma of the vulva. It begins as an increasing hypertrophy of the interpapillar epithelial processes, whereby they penetrate more and more deeply into an underlying connective tissue which is already crowded with plasma and other inflammatory cells, and from which all elastic fibres have previously disappeared. A, Thickened epithelium, with large interpapillar processes. B, Subepithelial zone, the seat of diffuse rarefaction, due to inflammatory cell proliferation and disappearance of collagen and elastin. C, Normal tissue, with elastic fibres. (Camera lucida drawing.)

of the chief causes when it is remembered that 84 per cent. of the patients at least have been subjected to coition, that the age of incidence corresponds fairly closely to the limit of the most active period of this function, whilst the question of parity is of no assistance, since practically the parous and sterile women are in equal numbers. In none of our cases was there any history or signs of antecedent syphilis.*

Pathology of Carcinoma of the Vulva.

In any case of carcinoma of the vulva we have operated upon and in every case we have seen, leucoplakic vulvitis has been present.

It has been shown that in leucoplakic vulvitis the maximum hypertrophy of the interpapillar epithelial processes occurs in the second stage—that is, that in which the cellularity and rarefaction of the subepithelial tissues are also at their maximum. It is in this stage that the supervention of carcinoma is to be feared. It begins over a variable area as an increasing hypertrophy of the interpapillar epithelial processes, whereby they penetrate more and more deeply into the underlying connective tissue. The connective tissue papillae are more than correspondingly elongated, so that they reach much higher than normal, but they are thin and compressed. (Fig. 6.)

It would appear that the growth energy of the epithelial cells becomes confined to those deep down in the inter-

* Sections stained for the spirochaete of syphilis gave negative results.

papillar processes, while the more superficial cells, on the contrary, are of feeble vitality, loosely attached to one another, and actually desquamate before keratinization can occur. Thus the elongated papillar processes of the corium eventually reach the free surface, which now bleeds readily from punctate points corresponding to their apices. The condition may be likened to an area of skin after a Thiersch graft has been removed. This absence of keratinization and early desquamation of the surface cells of a squamous celled carcinoma is very striking, and contrasts markedly with the condition found in a papilloma.

The epithelial downgrowths, which are at first simply the enlarged pre-existing interpapillar processes of the epidermis, later become branched and tortuous.

This development of squamous-celled carcinoma from hypertrophied pre-existent interpapillar processes has been shown by one of us to be a constant feature of the disease, wherever its site; for even in positions such as the vaginal cervix, in which normally no papillae or interpapillar processes exist, a series of such are always formed previous to the onset of squamous cell carcinoma there as a result of the chronic cervicitis which is its invariable antecedent. The formation of interpapillar downgrowths of epithelium would appear to be an adaptation to relieve lateral growth tension, for it is certain that in all conditions of hypertrophy of the lower strata of an epidermis

Fig. 7.—Very chronic type of leucoplakic vulvitis, with excess of elastic tissue in the connective tissue. The epithelium is hypertrophic, but the interpapillar epithelial processes are smaller than normal.

they either appear *de novo* (cf. chronic cervicitis), or if normally existent become much exaggerated (cf. the skin).

Further, it would appear that so long as the growth energy of the epithelial cells is evenly distributed along the length of the epidermis enormous hypertrophy may take place without malignancy. But that when the growth energy becomes concentrated at a series of points corresponding to each interpapillar process, a want of co-ordination is established which at once makes the condition dangerous.

The relation between the malignant epithelial ingrowth and the altered state of the subepithelial tissues is an important subject.

We have in leucoplakic vulvitis two sets of phenomena going on simultaneously—namely, those in the epithelium and those in the connective tissue. In both of them an accession of cellular energy takes place which then declines and finally gives place to a state of cellular activity and reproduction much below the normal. But a study of the earliest stages of the disease shows that the activity of the connective tissue cells is that first awakened, the growth of the epithelial cells initially being actually inhibited.

Thus it comes about that a profoundly altered state of the subepithelial tissue anticipates the occurrence of epithelial hypertrophy.

Further, it would appear that a condition of rarefaction and cellularity of the subepithelial tissue is an important factor influencing epithelial ingrowth. For in the earliest phases of carcinoma of the vulva, in which the epithelial ingrowth is only as yet foreshadowed, the connective tissue cell proliferation around this area is already typical of that seen in the developed disease.

The disappearance of elastic tissue in the area of a beginning carcinoma is very striking. On the other hand, there is evidence to show that an excess of these fibres probably acts as a check to epithelial ingrowth. In certain very chronic types of leucoplakia in which the subepithelial changes never reach a high degree of cellularity, a great excess of elastic tissue may be found. In the later phases of this condition considerable epithelial hypertrophy occurs, but without those long interpapillar downgrowths which are the first indications of approaching malignancy (Fig. 7).

Further, the more benign papillomatous type of carcinoma of the vulva shows less destruction of elastic tissue than the more malignant ulcerative form. Dense sclerosis of the white fibrous elements also probably checks epithelial ingrowth, and as this progresses in the later stages of leucoplakic vulvitis the tendency to carcinoma becomes increasingly diminished.

Of the cellular elements in the connective tissue, the plasma cells are those which most characterize the second stage of leucoplakic vulvitis, and these are also the predominant tissue cells in carcinoma of the vulva. They bear this relation to the initiation of epithelial ingrowth—

Fig. 8.—Portion of a nodule of carcinoma that occurred on a recurrent patch of leucoplakic vulvitis, left after imperfect primary excision. The tissue on the right is carcinomatous; that on the left leucoplakic.

namely, that they are largely responsible for the decollagenization of the subepithelial tissue which occurs in the antecedent leucoplakic vulvitis.

Though changes in the adjoining connective tissue bear some very close relation to the cause of epithelial ingrowth, yet, malignancy having been established, the further spread of the tumour is independent of such assistance. For one of us has shown that the condition of the connective tissues surrounding an advanced inrunner of carcinoma cells is one of passivity, and that the same is true of the tissue surrounding permeated lymphatics* and metastatic growths, excepting those in lymphatic glands, which are an exception to this rule.

Multiple Carcinomata of the Vulva.

Multiple carcinomata are more frequently met with in the vulva than any of the other common sites of this disease. This occurrence has been interpreted by some as an evidence of autoinoculation.

The cases that have been interpreted in the manner mentioned may be divided into two classes: Pseudo-multiple growths and true multiple growths.

(*a*) *Pseudo-multiple Growths.*—Many growths which at first sight appear to be double are in reality bridle-shaped, a thin tract of carcinomatous tissue uniting them across the middle line, usually just under the clitoris. When a

* This fact concerning lymphatic channels permeated by carcinoma was first stated by Sampson Handley, Hunterian Lecture, Royal College of Surgeons, 1906.

growth crosses the middle line it rarely does so directly by way of the vestibule. This is due to the fact that the vestibula mucosa usually escapes the antecedent vulvitis—that is to say, it is not in a precarcinomatous state. Ribbert stated, and we confirm his view, that the surface spread of a carcinoma is at first by successive carcinomatous conversion of the epithelium covering the precarcinomatous area. When this is exhausted further growth continues by division of the cells already formed, but there is no conversion of normal epithelium into carcinoma, the former simply undergoing a pressure destruction owing to the infiltration of the subepithelial tissues by the cells of the growth.

(*b*) *True Multiple Growths.*—We have seen four such. In three out of the four they occupied the same side of the vulva, and in none of them do we think that there was any reason to believe that they arose by autoinoculation. In all of them the vulva was leucoplakic, and the double growths were separate by a tract of mucosa that showed the typical changes belonging to that condition. Each separate growth was an entity to itself, starting in its own set of hypertrophic interpapillar processes, and in three of the cases contact between the two tumours was from their position impossible. Moreover, there was no microscopical evidence of any new element having been introduced either from the surface or from the subcutaneous tissue.

Such multiple growths, therefore, should neither be attributed to autoinoculation from the surface nor to metastatic deposit via the subcutaneous tissue. Microscopically it is quite common to find dual, treble, or even quadruple points of beginning carcinoma. In fact, seeing that every downgrowth begins as a hypertrophic interpapillar epithelial process, the growth may be said always to begin at multiple points.

The rarity of multiple primary growths of the vulva, in spite of the large precarcinomatous area existent, suggests the possibility that the epithelial ingrowth at the point of the carcinoma may act as a safety valve to the increased lateral growth tension that undoubtedly exists throughout the leucoplakic epidermis, and relieves the latter of its tendency to ingrowth.

Local Recurrences of the Growth.

There are two types of local recurrence. The first is that in which the original growth has been inefficiently removed, and recurrence takes place in the scar a short time afterwards. We have met with none such. The second is of a different nature, and we have met with examples of this after excision of the vulva. It is due to a separate cancer originating almost from a portion of the precarcinomatous area that has escaped removal. It is here to be noted that unless the lines of incision on removal of the vulva for leucoplakic vulvitis are so planned as entirely to be without the diseased area, the leucoplakic condition returns in the scar.

These recrudescences in a portion of leucoplakic epithelium left behind at the original operation are in no way to be confounded with secondary metastatic nodules. Such nodules are subepidermic in origin, whilst the recrudescence is obviously arising from a certain group of hypertrophied interpapillar processes belonging to an area the whole of which is leucoplakic and precarcinomatous (Fig. 8).

Glandular Metastases.

Glandular involvement occurs late as compared with squamous-celled carcinoma in other sites. The inner set of horizontal inguinal glands are those first affected on one or both sides. When affected they rapidly enlarge, and subsequently often break down. Sections cut from them at this period may fail to demonstrate the nature of the change, so complete is the destruction of the cells that has taken place.

All enlarged glands are not, however, carcinomatous. It has been shown by one of us[3] that lymphatic glands prior to their invasion by carcinoma cells are enlarged by a plasma cell proliferation affecting the trabecular elements together with a great hypertrophy of the germinal areas and an increase in number of the lymphocytes derived from them. Glands thus affected may attain a large size, mimicking true carcinomatous enlargement so closely that microscopical investigation is alone competent to decide its nature.

TREATMENT.

We have tried a large number of remedies for the pruritus in leucoplakic vulvitis, and have found that most of them have failed to give relief. We have had the greatest success with zymocide lotion, resinol ointment, and the *x* rays. In view, therefore, of our pathological findings, we advise that the affected area should be excised in all cases where these fail, and since we have shown that a permanent change of character has taken place in all the epithelial cells over the affected area, the excision should be a wide one lest the disease recur again in the scar, which has happened to us in two of our cases.

The treatment for kraurosis vulvae is to dissect out the painful parts complained of and enlarge the vulval orifice. In carcinoma the inguinal glands on both sides should be removed, whether enlarged or not.

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A NEW COLOUR-PERCEPTION SPECTROMETER.

BY F. W. EDRIDGE-GREEN, M.D., F.R.C.S.

THE instrument here described is a spectrometer so arranged as to make it possible to expose to view in the eyepiece the portion of a spectrum between any two desired wave-lengths. It consists (Fig. 1) of the usual

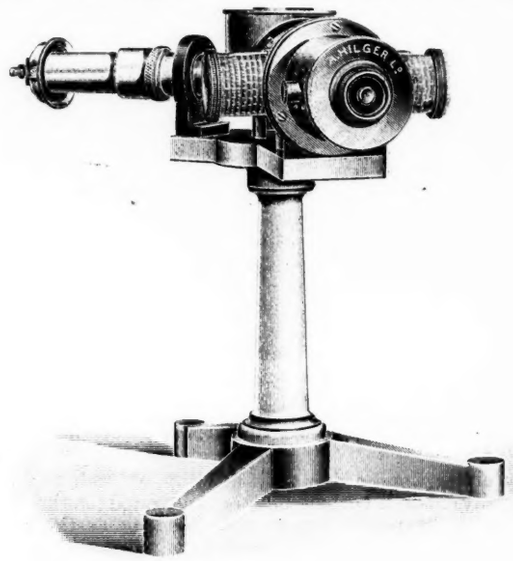

Fig. 1.

parts of a prism spectroscope—that is, a collimator with adjustable slit, prism, and telescope with eyepiece—of the following dimensions:

Focal length of collimator and telescope object glasses = 7½ in. (180 mm.). Clear aperture of collimator and telescope object glasses = ⅞ in. (22 mm.). Slit 7 mm., effective length of jaw, with wedge for reducing the effective length of the slit, protective cap, comparison prism, and screw adjustment for the slit with divided head (see Fig. 2). The prism is of flint glass, 1.65 refractive index for D. Eyepiece, Ramsden form, focussing on to the shutters described below.

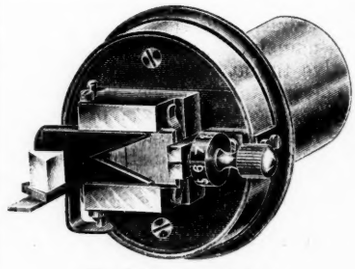

Fig. 2 (0.6×actual size).

In the focal plane of the telescope are two adjustable shutters with vertical edges, the shutters being carried by levers which rotate about centres near the object glass of

the telescope. The shutters can be moved into the field from right and left respectively, each by its own micrometer screw, and to each screw is attached a drum, the one being on the right and the other on the left of the telescope. On each of these drums is cut a helical slot in which runs an index, and the drum is engraved (see Fig. 3) in such a manner that the reading of the index gives the position in the spectrum of the corresponding shutter in wave-lengths direct.

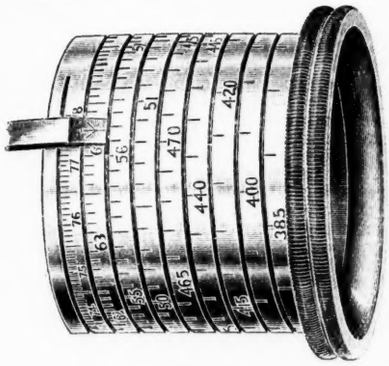

Fig. 3.

Thus, it will be seen that if, for instance, the reading on the left drumhead is 5,320 and that on the right drumhead is 5,920, the region of the spectrum from wave-length 5,320 to wave-length 5,920 is exposed to view in the eyepiece.

An adjustment for the shutters is provided in case of possible zero alterations in course of time. These adjustments—which are provided for each shutter independently—are reached by unscrewing the small screw caps on the right and left of the eyepiece end of the telescope. This exposes a screw with a square head, on to which head fits a key which is provided. To adjust the shutter the corresponding drumhead is set to the wave-length of one of the sodium lines. The slit is illuminated by a sodium flame, and the key is turned till the edge of the shutter exactly coincides with that line. The key is then removed and the reading checked. The drum will then read correctly throughout the entire spectrum.

Care should, of course, be taken to avoid pressing inward with the key, to which only a turning force should be applied.

The method of estimating colour perception described above will be found in detail in my book on *Colour Blindness* in the International Scientific Series, and in a paper in the *Transactions of the Ophthalmological Society*, 1907. It is the method which I originally advocated for testing colour perception, but with the two previous spectrometers devised by me the process was very tedious when quantitative observations were required. The same work can be done with this instrument in less than a twentieth of the time. It is made by A. Hilger, 75A, Camden Road, N.W.

The instrument should be used as far as possible with a known quality and intensity of light. The observer should first ascertain the exact position of the termination of the red end of the spectrum, the left-hand shutter being moved across until every trace of red just disappears. The position of the pointer on the left-hand drum is noted, and the wave-length recorded. The left drum is then moved so that the shutter is more towards the middle of the spectrum. The right-hand drum is then moved until the pointer indicates the wave-length recorded as the termination of the red end of the spectrum. The observer then moves the left-hand shutter in and out until he obtains the largest portion of red, which appears absolutely monochromatic to him, no notice being taken of variations in brightness, but only in hue. The position of the pointer on the left-hand drum is recorded. The left-hand shutter is then moved more towards the violet end of the spectrum. The right-hand shutter is then placed at the position previously occupied by the left-hand shutter. In this way the whole of the spectrum is traversed until the termination of the violet end of the spectrum is finally ascertained with the right-hand shutter. The variation of the size of the patches and the terminations of the spectrum with different intensities of light can be noted. The instrument can also be used for ascertaining the exact position and size of the neutral patch in dichromics, the position of greatest luminosity, and the size and extent of pure colours. When it is used to test colour-blindness, the examinee should first be shown some portion of the interior of the spectrum, and then asked to name the various colours which he sees. In this way he will have no clue to the colours which are being shown him.

The cost of the construction of the instrument was defrayed by a grant from the Royal Society.

TREATMENT OF POST-OPERATIVE SHOCK BY PITUITARY EXTRACT.

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THE great disadvantage of adrenalin in the treatment of shock is that though it produces great rise in blood-pressure and increase in arterial tone, this effect passes off in an hour or so, and the dose has then to be repeated. Any drug which would produce the same effect without the disadvantages mentioned would be a distinct advance. This I think has been discovered in pituitary extract.

I am indebted to Messrs. Burroughs and Wellcome for the samples of the drug which I used in the three following cases. It is an extract of the posterior lobe of the pituitary body, and is a fluid sterilized in the autoclave, each phial of which contains 1 c.cm. of a 20-per cent. solution.

The contents of one of the phials were injected intramuscularly into the patient's arm before the patient had fully recovered from the anaesthetic. The effect was almost immediate, and the almost imperceptible pulse soon became large and bounding. This lasted from twelve to sixteen hours, and gradually passed off. Not only did the pulse become larger in expansion but it was also slowed, and whereas it had been irregular it became regular. This effect seems due not only to the action of the drug on the blood vessels, but also on the heart. I gave the injection in conjunction with normal saline per rectum.

CASE I.

A woman was admitted complaining of great pain in the abdomen. She had a swelling on the right side over the appendicular region and extending up above the umbilicus. The temperature was 101°, and the pulse 120. She stated that she had had this pain and temperature for over a week before admission. Abscess of the appendix was diagnosed, and immediate laparotomy decided on, as the patient was then somewhat collapsed. On the abdomen being opened an ovarian cyst was found with a twisted pedicle, and which was completely bound down by adhesions at the base; 12 to 15 oz. of foul-smelling pus were evacuated. The pedicle was transfixed, the adhesions tied and cut, and the cyst removed. The whole operation took an hour and three-quarters. The patient was put back to bed in a very collapsed condition: the pulse was small, thready, irregular, and exceedingly difficult to feel. The heart was fast and irregular, and the apex beat almost imperceptible. Pituitary extract was injected into the deltoid muscle, and in five to ten minutes the pulse became gradually larger in expansion, more regular both in time and expansion, and slower. In about a quarter of an hour the pulsation in her temporal arteries could be seen at some yards' distance. In about half an hour's time ¾x of normal saline were given by the rectum, and the same quantity four-hourly during the night (the operation was finished at 10 p.m.). The next morning the pulse was still large, and the effect of the pituitary extract was then evident, but gradually passed off in about fifteen hours. The woman recovered.

CASE II.

A boy, aged 2, was admitted suffering from intussusception of ileo-caecal type, with a history of sixteen hours' duration. An hour after admission he was operated on and the intussusception reduced. The last portion of the bowel was very difficult to reduce, and was very dark in colour and congested, with a considerable deposit of lymph. It was returned, and the wound closed. The boy was put back to bed, and was found to be suffering from considerable shock. An injection of 7 minims of pituitary extract was given into the deltoid muscle, and in a few minutes the small, feeble pulse became large, regular, and forceful. Saline was also given by the rectum in small quantities. The effect lasted about twelve hours, and the boy made an uneventful recovery.

CASE III.

A man suffering from Jacksonian epilepsy was trephined, and a considerable area of bone nibbled away over the motor area. A tumour was there found, but proved irremovable. The wound was stitched up, and the patient put to bed. There was considerable shock. An injection of 1 c.cm. of pituitary extract was given into the deltoid muscle, and the same effect was observed as in the other cases. The man got over his operation, and left the hospital.

In the adults the full dose of 1 c.cm. was given. There were no signs of any ill effects whatsoever. There was

an increase of the urine passed next day after operation, and it was passed naturally. There was no increased tendency to haemorrhage. The only disadvantage observed was that there was a tendency to reaction after the effect of the injection had passed off, but this was transitory, and the patient was then over the worst period.

I have to thank Mr. Stamford for permission to publish the first two cases, and Dr. Foulds for the third.

INVERSION OF THE APPENDIX AND CAECUM.

By W. J. GREER, F.R.C.S.IREL.,

CONSULTING SURGEON TO THE PONTYPOOL HOSPITAL; SURGEON TO THE NEWPORT AND COUNTY HOSPITAL.

THE number of recorded cases of partial or complete inversion of the appendix appears to be small, so the comparative uncommonness of the condition, as well as its interest, leads me to think that observations on an additional example are worthy of recital.

Fig. A.—Mucous surface of excised portion. 1, Colon; 2, ileo-caecal valve; 3, inverted appendix.

Fig. B.—Peritoneal surface of excised portion. 1, Colon; 2, ileum; 3, tip of the appendix.

History.

A girl, aged 7, was admitted to the Newport and County Hospital under my care on February 29th, 1908, with a history of having had attacks of pain in the abdomen for five weeks previously. There was some diarrhoea at first, but lately the bowels had acted only in response to aperients. Blood had been passed by the rectum, and vomiting was frequent.

Condition on Admission.

The patient was obviously very seriously ill, the pulse small and rapid, the abdomen somewhat distended. Examination revealed a soft elongated tumour in the region of, and parallel to, the direction of the transverse colon; the tumour was freely movable, and manifestly tender to touch. A diagnosis of intussusception was ventured, and immediate coeliotomy determined on. A.C.E. was administered by Dr. R. McC. Linnell, and Dr. O. K. Wright assisted at the operation.

Operation.

A vertical incision about 10 cm. long was made through the middle of the right rectus; the small intestine was found to be dilated and the caecum was not visible. The portion of the ascending colon in view was widely and tightly distended and fixed to the posterior abdominal wall. The appearances were very confusing, as three portions of small gut seemed to enter the base of the mass; on pulling gently on these one was seen to come away out of the centre of the mass, and proved to be a loop of small intestine which had merely packed itself into the hollow—most likely very recently, as it was not in any way strangulated. This disposed of two of the entering portions of small intestine; the third was then defined as the termination of the ileum connected with an intussusceptum. Traction on this caused the tumour in the transverse colon to recede rapidly until about midway in the ascending colon, where it became immovable, and further reduction was impossible without serious tearing of the structures. A longitudinal incision was then made in the colon, the mass extracted, cut off at its neck, the disparity in the calibre of the tubes adjusted, fine silk sutures inserted, and the junction returned into the colon; a line of similar suture material was carried round the joint on the peritoneal aspect, the wound in the intussuscipiens united with a double row of sutures, a pint of hot saline poured into the peritoneal cavity, the abdominal incision closed with through-and-through sutures of silkworm gut, a wick of gauze carried down to the vicinity of bowel repair and retained for forty-eight hours.

After-History.

The child made an excellent recovery, and was discharged well on March 26th, 1908. I have seen the patient recently, and she is in good health.

Description of Part Removed.

An examination of the specimen shows it to be composed of caecum and colon 11 cm. in length, its width when cut vertically and spread out, 9 cm. The length of ileum removed is 5.5 cm. The appendix is 4 cm. long, 1 cm. of its base being inverted; the meso-appendix is thick and strong. The distance between the centres of the aperture of the appendix and ileo-caecal valve is 3 cm.

A careful scrutiny does not reveal any evidence of the ileum having passed through the ileo-caecal valve.

The accompanying illustrations will demonstrate the parts more clearly than any more detailed description.

Fig. A shows the mucous surface; the figure 1 is on the colon; 2 on the ileo-caecal valve; 3 the inverted appendix.

Fig. B shows the peritoneal surface; the figure 1 is on the colon; 2 on the ileum; 3 on the apex of the appendix. The mass is swollen, oedematous, in parts almost gangrenous; the

ileo-caecal valve is not occluded by any growth or foreign body, the appendix is also patent, nor is there any concretion or polypus either in it or the ileum.

Kelly and Hurdon in their work on the *Vermiform Appendix* (1905) draw attention to the rarity of intussusception of the appendix, either alone or associated with other intussusceptions, and also to the fact that such an occurrence usually takes place in children, for in only one of the 19 collected histories was the patient an adult. These authors divide the cases into three groups:

1. Those in which the appendix is carried along incidentally with the intussusceptum.

2. Those in which the intussusceptum starts at the appendicular junction portion of the colon.

3. Those in which there is an inversion of the appendix either with or without inversion of gut.

The case now recorded falls, I think, into the third class; that is to say, the appendix was partially inverted, or to be more accurate, it was turned inside out at its base, and for some distance, and travelled thus up the ascending into the transverse colon, maintaining its position at the apex of an intussusceptum, which was composed of inverted caecum and ascending colon.

Battle and Corner also allude to the condition in some detail in their work on *The Surgery of the Diseases of the Appendix Vermiformis and their Complications* (1904), and Mr. E. M. Corner deals with the subject in an article in the *Annals of Surgery*, November, 1903, p. 708.

In my case it is probable that the appendix became invaginated first, and that the caecum and ileo-caecal valve followed; the partial inversion of the appendix having excited the caecum to contract, the caput coli being then drawn in, blocking the ileo-caecal valve, the colon eventually taking action, seizing the mass and carrying it forward, assisted by the peristalsis in the small intestine resulting from the more or less blocked valve. The fact that the appendix is in the van lends support to this theory, though there is no evidence as to the nature of the *vis a tergo* inciting the primary appendicular invagination; but it may be that the invagination of the caecum occurred first, and that vigorous contractions of the colon took the mass onward; this latter being swollen and unable to recede, the squeezing process may have produced the inversion of the appendix, complete turning inside out being prevented by its thick short mesentery. Again, it is also possible that the ileo-caecal valve may have entered the colon first and carried with it the base of the appendix (Gerlach's and Nanninga's folds), and the subsequent squeezing, moulding, and turning inside out process may have thrust the inverted appendix to the front.

This last might have happened, as it seems that the distance between the ileo-caecal and appendicular openings is perhaps less than usual (3 cm.), and consequently the appendix would be readily conveyed with the valve. It is not possible to express a decided opinion as to the extent to which the other factors—long mesentery, irregular peristalsis, etc.—usually assigned as causative of the process of invagination contributed to the result. It will be clear that the caecum must have been freely movable, and its absence from the field at the early stages of the operation gave a semblance to a case of undescended caecum.

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ACUTE MASTOID SUPPURATION AND SUPPURATION IN THE NECK

TREATED WITH STAPHYLOCOCCUS VACCINE.

BY JAMES SCOTT, M.D., C.M., B.Sc. (PUB. HEALTH), D.P.H., ETC., EDINBURGH.

THE case is that of a man, aged 56, who has always enjoyed excellent health, never having suffered from any serious illness.

On September 11th, 1908, while on holiday, he caught a severe chill, followed by acute pains in the right ear and right side of the neck. Hot fomentations were applied and the ear syringed, but the pain was not relieved until the tympanum burst on September 13th (two days after the chill), when pus was freely discharged.

On September 26th he returned to his home in Edinburgh, and on examination pus was then observed coming from the middle ear through the perforation in the tympanum. The ear was syringed with boric lotion and powdered boric acid insufflated daily, but the discharge continued. Mercury perchloride lotion—1 in 2,000, then 1 in 1,000—was tried; this had no effect in diminishing the pus.

On October 23rd a slight swelling appeared over the mastoid region, which gradually enlarged and extended downwards behind the sterno-mastoid and backwards towards the occiput. It was evident the mastoid cells were involved and that operative interference was necessary. Dr. Logan Turner, Ear Department, Royal Infirmary, Edinburgh, was consulted, and he advised operation.

Operation.

On November 4th Dr. Logan Turner, assisted by myself, opened into the mastoid cells and the antrum, which contained a considerable quantity of pus; close to the tip of the process and upon its inner aspect the bone had given way, forming a Bezold perforation, through which the tissues of the neck had become infected. A second incision was made along the posterior border of the sterno-mastoid on a level with the angle of the jaw; on passing a pair of dressing forceps behind the muscles, pus escaped freely. Drainage tubes were inserted into both wounds, which were dressed with aseptic gauze every second day. Pus ceased to come from the ear on the fourth day after operation, but continued to flow copiously from both wounds. Gradually it diminished, and the wounds were healed by December 15th.

The patient went to the country from January 4th to January 16th, 1909, with the intention of taking a rest before returning to duty on January 18th; while there a small abscess formed in the wound behind the ear; it burst, and pus began to run in small quantities. I syringed the abscess with perchloride lotion and dressed it with iodoform gauze, but it soon became evident that pus was burrowing its way backwards towards the occiput and downwards behind the sterno-mastoid. Dr. Logan Turner was again consulted, and he suggested that the abscess should be opened. On March 2nd, 1909, three incisions were made—one behind the ear, a second over the occiput, and a third over the tip of the mastoid; a large quantity of pus escaped from the three openings; drainage tubes were inserted, and the wounds dressed daily for a week, then every second day; pus ceased to come from the posterior and inferior openings a fortnight after operation, but continued from the one behind the ear; it diminished for a time, but then began to flow so copiously that it saturated the dressings and ran down the neck so that I had to dress it daily. On April 11th I made two plate cultures; a loop of pus was spread over one plate, and the glass rod, after spreading the first plate, was drawn over the second. In twenty-four hours there were seventy-two colonies on the first, and

seven on the second. The organisms were then separated and grown in tubes, and were found to consist of:

1. *Staphylococcus pyogenes albus* (largest number of colonies).
2. *Diplococcus pneumoniae* (Fraenkel).
3. A bacillus whose specific nature was not determined.

The amount of pus was increasing daily, and as it seemed to be caused principally by the staphylococcus, I determined to try a vaccine against the staphylococcus alone, and if the other organisms did not disappear, to use vaccines against them later.

On April 17th, 50 million staphylococcus vaccine (Wright) was injected into the left flank. For three days the pus diminished in amount, but gradually increased until on the sixth day the amount was as great as before injection.

On April 24th, 100 million staphylococcus vaccine was injected, and every tenth day a similar dose was given until he had had altogether eight injections. After the fourth dose there was no discharge, and the wound healed beautifully.

Before injecting the vaccine I consulted with Dr. James Ritchie, Superintendent of the Royal College of Physicians' Laboratory, Edinburgh, as to whether a mixed vaccine should be given. It was decided to try the staphylococcus vaccine, and you will observe how successful the results have been. There was never any rise of temperature after the injections, and the patient has not felt the slightest inconvenience; he has been regularly at work since January 18th, with the exception of a fortnight after the second operation, and now feels as strong and healthy as ever he did. In September, 1908, his weight was 12 st. 2 lb.; April, 1909, 10 st. 9 lb. His hearing in the right ear is now normal. He is now steadily gaining weight. The points I should like to draw attention to are:

1. The specific causes of the disease—the three different organisms which had probably found their way from the pharynx by the Eustachian tube to the middle ear.
2. When the wounds healed up the first time organisms had remained in the tissues, and a second chill reduced the vitality of the parts, thus allowing the organisms to become more active.
3. That it is not always necessary to estimate the opsonic index when the amount of discharge is seen and the effects of the dose of vaccine easily gauged.
4. When there is more than one organism present, by using a vaccine against the most numerous or virulent type, the others may be killed by phagocytes or die off.
5. In using antiseptics we may be killing only those organisms with which they come in direct contact in the wound, leaving those in the deeper parts to multiply.
6. In using a vaccine the organisms are attacked in every part through the blood.
7. The point of greatest importance is: Had I used the vaccine immediately the pus was seen in September, 1908, would it have had the same effect as it afterwards had? This question I am inclined to answer in the affirmative, and I should advise those who have similar cases to try the stock vaccine of Wright or one made from the organisms of the discharge.

IS RADIUM A CURE FOR CANCER?*

By Dr. LOUIS WICKHAM,
DIRECTOR OF THE RADIUM INSTITUTE, PARIS.

If I think it useful to write an article on this subject it is because it has become apparent that in different quarters a misunderstanding has arisen as to the conclusions which I have drawn at various times in my lectures.

Some medical men have limited their opinions to the reservations I made in my communications, and have remained incredulous of the value of radium. Others, who were greatly impressed by such good results as I have obtained, have gone too far, overstepping my thoughts and the facts themselves, and have helped to establish a current of exaggeration and enthusiasm which is far from being scientific.

It is therefore necessary to put a stop to these false impressions with regard to the real value of radium.

The following conclusions are drawn from the 600 cases which I have treated during the last five years with Dr. Degrais.

It must first be stated that the word "cancer" is used in its widest sense, signifying a whole series of malignant new growths histologically different, including epitheliomata, carcinomata, lymphosarcomata, sarcomata, lymphadenomata, mycosis fungoides, etc.

Considered from this point of view I can affirm, from a study of some cases of tumours of each variety, before, during, and after the treatment, that the malignant evolution of these tumours may not only be arrested for months, but that occasionally these tumours have entirely disappeared, giving the impression of real cure, the rays having on cancer cells a somewhat selective action.

This first point is most striking, and it has led, from the point of view of practice, to an exaggerated favourable conclusion. We must not rest satisfied with the observation of the growths alone; we must reason as medical practitioners, and place ourselves in the position of the patient with cancer, and see if in practice the patient derives any definite benefit from these selective effects of radium, and to what degree.

On this new ground, practice, the use of radium is faced by numerous material and other difficulties and drawbacks such as the following:

1. If the cancer is voluminous and increasing rapidly in size, the practitioner has to deal with the following vicious circles:

   (*a*) The necessity of acting rapidly;
   (*b*) The fear, when acting too rapidly, and with large doses, of causing toxaemia, and accidents of which he must be particularly on his guard, if he is not sufficiently experienced in the technique, in all cases of large cancers, for example, those of the abdomen.

2. There is no recourse against metastatic growths at a distance:

   (*a*) Cancerous migrations by lymphatic vessels;
   (*b*) Cancerous migrations by the blood stream;
   (*c*) Migrations by the serous surfaces;
   (*d*) Migrations by the natural passages.

Radium cannot at present have other pretensions than to act on lesions which are localized and sufficiently accessible, or rendered accessible. In cases with generalization, the resources of radium are limited to the reduction in size of the principal tumours, to the arrest of haemorrhage and secretion, and to the diminution of pain.

3. If the cancer is localized and accessible, but inoperable, radium, with some rare but very remarkable exceptions, can only diminish or stop the haemorrhages and secretions, and occasionally render the tumour operable; but, in spite of these great advantages, which result in a prolongation of life, the patient, in the end, dies of his cancer.

4. The influence of radium diminishes as the tumour becomes less and less accessible. It is true that the rays of great penetrating power act at a depth without serious injury to the skin surface, but the results will be more uncertain as the tumours are less accessible. The few cases of inoperable cancer which were despaired of, and which I have been able to reduce and maintain, were all easily accessible cases (cancer of the parotid, of the glands in the neck, sarcoma of the shoulder, cancer of the rectum situated at a distance of less than 10 cm. from the anus, etc.).

5. Certain tissues are infinitely less favourably acted on by radium than others, for example, the mucous membranes, especially of the buccal cavity (tongue, tonsils, pharynx, etc.), and in these cases must be added the material difficulty of reaching the region conveniently, and applying the heavy screen-filters and leaving them in position for a sufficient length of time.

6. Lastly, if the cancer is very extensive, a radium-therapeutist has great difficulty in obtaining the stock of radium necessary to act sufficiently in every direction, for the number of doses needed in a number of cases is very high.

Now it is easy to understand from our previous knowledge that the use of radium is limited by a whole series of material or clinical conditions. The result is that:

(*a*) To speak in a general way of the cure of cancer by radium, without specifying and explaining circumstances, is to make use of antiscientific and inexact language; and

* I must express my best thanks to Dr. Robinson, of Paris, for his kindness in translating this note.

(*b*) Too great enthusiasm in radium is apt to lead the doctor who possesses any to use it too much, and thus deprive the patient of the benefits of other treatments which have already proved their utility, especially surgery.

At this point I wish to separate myself from those who extol radium beyond reason. I have been content during the last five years to watch over, observe, and classify the facts, and that is all that must be done at present; any definite conclusion concerning large cases of cancer would be quite premature.

When a doctor who possesses radium is consulted in a case of cancer he should proceed as follows:

(*a*) In cancers of the skin which are localized, superficial, non-inflammatory, and of rather small dimensions, radium is of great benefit, and he can, without exaggeration, assure the patient of a cure, but only on condition that the patient binds himself to come once each month for a long period to see the doctor, to catch the first trace of any relapse; but the patient must be told also that many other means exist—such as surgery, *x* rays, etc.—which cure just as well.

(*b*) In all other cancers, whatever their nature, the doctor must first consider if these other means cannot do better. If surgery can do better (as in excision of the breast for an operable cancer, or in excision of a commencing and operable cancer of the tongue, etc), then radium can be suggested to consolidate the cicatrix after the operation; treatment by radium is then an auxiliary to surgery, and I consider it better than the *x* rays on account of the penetrating power of the radiations.

If surgery is powerless because the cancer is too advanced, extensive, and consequently hopeless, then radium can be employed as a last resource to alleviate pain and prolong life; it can also be applied after the chief part of the growth has been removed by the knife, but in those cases the patient's relatives must be duly warned of the temporary nature of the relief.

If the surgeon cannot intervene on account of the seat or the depth of the lesions, then he can resort to the knife to open the way for the more direct application of radium apparatus (chelotomy, etc.) by means of a catheter.

If the surgeon is unable to intervene on account, not of the gravity of the cancer, but because the condition or age of the patient prevent, or because he refuses an operation, then radium can be applied. It is in these rare conditions in which radium can be applied to less advanced lesions that this method would progress and show what results it can produce, and give statistics which would warrant a bolder intervention in other cases.

Such is the line of treatment I have followed to the present time.

When dealing with a new therapeutic agent which has given such brilliant results from some points of view, one must be armed with all one's *sang froid*, and observe the facts with justice. The question thus presented of the part which radium is actually able to play in the fight against cancer places it, in spite of the reservations enumerated, in a good position, because it is a valuable auxiliary in sufficiently experienced hands and in certain cases which one must know how to distinguish.

The future is still more promising; the results I speak of I have obtained with considerable doses, it is true, as compared with those of the first investigations, but these doses are diminutive in comparison with what will soon be available. In the first instance 1 mg. or 1 or 2 cg. of pure radium was employed, now we use 5 to 50 cg.; soon we shall be able to count on several grams. The progress observed between the first two phases gives some idea of what may perhaps be realized in the future.

At all events, at the present time it would be unjust, in judging the value of radium-therapy, to limit its advantages to its action on malignant tumours; it must be considered as a whole, and especially in its action on angiomata of a prominent and erectile kind; on cutaneous vascular tumours, cheloids, certain rebellious forms of eczema, obstinate tuberculous glands, certain forms of lupus; and then, considering the ground already won, it is difficult, without any exaggeration, not to recognize that radium-therapy, as I have often repeated, has won its place in the therapeutic armamentarium, that the fine French discovery of Curie and of Madame Curie has borne definite and certain fruit in the medical field.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

A SIMPLE METHOD OF COUNTING LEUCOCYTES.

THE following method is easy, simple, and capable of rapid completion. The implements cost only a few pence; the results are much more uniform (in my experience) than those of the Thoma Zeiss apparatus; it is far less tiring than the old methods; and accurate results can be obtained by those who only seldom have occasion to count leucocytes.

The method depends on the obvious fact that when equal-sized drops of diluted blood are placed on a clean slide they should cover equal areas and contain equal numbers of cells. The question of the different degrees of viscosity of different samples of blood may be neglected on account of the high dilution used.

The blood is drawn in the usual way, and diluted ten or twenty times with water, which had better be distilled. Any of the recognized mixing pipettes may be used, but the following method is good and simple:

By means of a capillary tube and teat a measured quantity of blood is drawn up, and, in the same way, ten times as much water. The fluids are blown out into a watch-glass, and upon the little pool thus formed a stream of air is blown through a capillary tube. The jet of air, when properly managed, forms a most efficient stirrer. A fair-sized drop of blood must be drawn if uniform results are to be obtained—enough to fill an inch and a half of capillary tubing is a suitable amount. If the blood has been mixed in a pipette it must be blown out into a watch-glass as soon as the mixing is finished.

Drops of the mixture are transferred from the watch-glass on to a slide by dipping the rounded tip of a glass rod into the watch-glass, and then touching the slide with the wet rod-end (an old clinical thermometer forms a convenient glass rod). The slide and rod should be free from grease; I generally pass them through a flame before use. The drops are placed in line on the slide, separated from each other by small intervals. A fresh dip must, of course, be made for each drop transferred. At each descent of the rod on to the slide or watch-glass a faint click should be produced by the contact. If attention is given to this trivial point the drops are more likely to be all of one size. It might be thought that more accuracy would be attained by measuring each drop out by means of a graduated pipette; but, practically, I think the above method is the better.

Ten or a dozen spots should be thus transferred to the slide, which is then dried in the sunshine or before a fire. Too quick drying may cause cracking of the films.

The dried slide is now very gently agitated in a dish of plain water until all the blood pigment is washed off and the slide may be held up to the light and examined. It will be seen that the place of each little spot of blood is marked by a small round film. If the slide is now examined under the microscope, with a small-aperture diaphragm, each spot will be seen to consist of a faint haze of débris evenly besprinkled with dark, conspicuous leucocytes. The clearness of the demonstration may be increased by staining the films with a watery solution of methylene blue. The enumeration may be done by counting the cells in several fields under a $\frac{1}{6}$ objective; but, owing to the comparatively small portion of each film that can be thus covered at one time, it is necessary to count a large number of fields if high uniformity is aimed at. I find the following method more accurate and less fatiguing:

A stiff paper obturator is cut to fit into the eyepiece tube the microscope. The paper is pierced with ranks of holes made by a large needle. The middle hole should be large to facilitate focussing and finding. Twenty or more perforations should be used, and they should be of such size as to show two or three leucocytes per hole on an average with normal blood. The obturator should be fitted into the middle of the eyepiece tube; a little manipulation will soon show the best position.

A low power should be used in counting, for then a wider field is covered, and the result is more representative of the whole film. If there are ten films on the slide, it is plain that by counting a field from each film one obtains a very good test of how well the blood has been mixed. I have never found any but the smallest variations when

the mixing has been done by the method described above. Two to four fields, each from a different film, is a quite sufficient number to count for ordinary purposes. To do this takes only a very few minutes. The field should be chosen approximately at the centre of each film.

The average number per field for normal persons is noted. It of course stands for about 8,000 cells per c.mm., and the degrees of leucocytosis are calculated from this. Or a standard may be established by comparing the first few counts with those of a Thoma-Zeiss or other haemocytometer.

Of course the same glass rod and obturator must be used for all counts.

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Colombo, Ceylon. Lieut. R.A.M.C.

Reports

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

GENERAL HOSPITAL, WOLVERHAMPTON.

PARTIAL RESECTION OF THE BLADDER FOR EPITHELIOMA.

(By W. F. CHOLMELEY, F.R.C.S., Honorary Surgeon to the Hospital.)

A man, aged 69, came under my care at the end of May, 1909. He complained of a great deal of pain at the end of micturition, felt in the penis, chiefly at the tip. He gave a history of passing a few drops of blood at the end of micturition. Urine was passed about a dozen times during the day, and two to three times at night. His urine during the time he was in bed under observation contained a small amount of blood, but was sometimes free of it.

On May 26th I examined the bladder with a cystoscope, and saw a growth on the right side reaching down to within a short distance of the orifice of the right ureter. The examination did not cause much bleeding. I proceeded at once to open the bladder above the pubes so as to get a better view of the disease, and to ascertain if it was possible to remove it. I found an obviously malignant growth, about 2½ inches in its largest diameter. It had apparently invaded the muscular wall, but, as the bladder felt very movable, I did not think it penetrated any deeper, and so should be easily removed. I first divided the right rectus muscle to give more room, and then separated the bladder from the peritoneum and tissues on the right side with my fingers. This was done with comparative ease and little bleeding. At the same time I removed with scissors the growth, together with a fair margin of healthy bladder, including the whole thickness of the bladder wall. The resulting wound in the bladder reached to within ½ in. of the orifice of the right ureter. I closed the gap in the bladder with a continuous suture of catgut, except at the top, where I put in a rubber drainage tube. I also sutured the divided rectus, and placed a tube into the tissues on the right side of the bladder, and a small gauze drain into the prevesical space. The abdominal wound was closed at the top and bottom with silkworm gut. A catheter was passed into the bladder through the urethra, tied in, and connected with a Cathcart apparatus to keep the bladder as empty as possible.

The after-history was quite uneventful, and on July 19th he was discharged, passing all his urine the right way. He can now, six months after the operation, hold his water for three hours during the day, and I have no doubt that, as time goes on, he will be able to hold it much longer.

It is early yet, of course, to say whether he is going to be free from recurrence; but I am certain that the recurrence will not take place in his bladder, as the removal was so free. One cannot be so certain about the pelvic tissue and glands. I could not at the operation feel any enlarged glands, but that, unfortunately, does not prove that they were not infected. I did not completely sew up the bladder, as I know so well that, no matter how carefully one may drain it by a Cathcart apparatus, there is a great danger that the catheter may become stopped up by some blood clot in cases where a certain amount of oozing is to be expected. Should that happen the bladder suture will give way and there will be an extensive infiltration of urine into the tissues round the bladder. An extensive leakage in this case would have been very serious, if not fatal, as the pelvic tissue was so freely opened up.

A piece of the growth was sent to the Clinical Research Association, which reported as follows:

This is an epithelioma derived from the stratified epithelium of the bladder. It invades the muscular wall by means of solid ingrowths containing here and there modified cell nests.

Reports of Societies.

MEDICAL SOCIETY OF LONDON.

Monday, December 13th, 1909.

SAMUEL WEST, M.D., F.R.C.P., President, in the Chair.

The Anatomy of the Heart.

A PAPER on recent researches on the anatomy of the heart was communicated by Dr. ARTHUR KEITH and Dr. IVY MACKENZIE. Dr. Keith, in reading the paper, said that some three years ago he published, together with Dr. Martin Flack, a paper on the muscular connexions between the various parts of the heart, and summed up the results of other researches which had been published at that time. In that paper there was described a small mass of peculiar muscle and nerves—a mass little bigger than a grain of wheat—which was constantly found at the termination of the superior vena cava in the right auricle, to which they gave the name of sino-auricular node. Because of its intimate connexion with nerves and the peculiar structure of its muscle fibres—similar to those of the auriculo-ventricular node described by Aschoff and Tawara at the commencement of the bundle passing from auricles to ventricles—they supposed that the sino-auricular node might prove to be the starting point of the heart's contraction. The sino-auricular node had no special muscular connexion with the auriculo-ventricular node except through the general musculature of the auricle. They were still of opinion not only that those nodes were devoid of a special connexion, but that they represented two quite different autogenetic systems in the heart. All those areas of specialized or primitive musculature, such as had been described as nodes, were really areas where the musculature of the heart came into an extremely intimate contact with the nervous system; nodes, indeed, were really neuro-muscular contacts. They found that those areas of the heart of the tortoise which Gaskell found to have the greatest power of originating the heart's impulse, and those of the eel which MacWilliam found were the most automatic, were areas made up of a mixture of nerve and muscle fibres. The appearances led to the belief that in these areas the nerve fibres became actually continuous with the muscle fibres, and that there were nucleated fibres which, from their structure and staining reaction, appeared to be intermediate between nerve and muscle fibre. To the cardiac areas which they regarded as made up of nerve and muscle fibres they proposed to give the non-committal name of "nodal tissue." Experiments would show that the auriculo-ventricular bundle was not only for the conduction of impulses from auricle to ventricle, but that through the bundle the condition of the ventricle was continually affecting the condition of excitability of the auricle. The bundle appeared from its nature to be not only a conducting but a co-ordinating mechanism. One of the chief results of their investigation had been to impress upon them the necessity of studying the special musculature of the heart in its relation to the extraordinarily abundant nerve supply of that organ. The excitable regions of the heart were those where the nerves came into a specially direct connexion with the specialized tissues which they had named "nodal." They had not touched on the abundant nerve supply to the sinuses of Valsalva at the commencement of the aorta and round the auriculo-ventricular orifices, which they regarded as end stations for sensory reflexes. The nerve plexuses at those regions were so close that zigzag experiments could not possibly

sever all the nerve connexions between auricle and ventricle. They were also of opinion that an entirely fresh description of the nerves to the heart was necessary, and that the fundamental differentiation must be into those nerves which supply the venous base or commencement of the heart (derived from the lower cervical sympathetics) and those which supply the terminal end or arterial base of the heart. It was those nerves which ended in the venous base which appeared to exercise the inhibitory and accelerating effects on the heart through the specialized nodal system.

Dr. THOMAS LEWIS spoke on the subject of auricular fibrillation and its relationship to complete irregularity of the heart as it occurs clinically, and referred to his preliminary communication on auricular fibrillation, which was published in the issue of the BRITISH MEDICAL JOURNAL for November 27th, 1909.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Wednesday, December 1st, 1909.

Dr. BYROM BRAMWELL, President, in the Chair.

Radium Treatment.

DR. LAWSON TURNER, in a paper on radium, said the use of thin sheets of plaster, as in the Radium Institute, Paris, was neither so practicable nor so efficacious as the use of a fragment of the radium salt in an aluminium tube or capsule. He had found it specially valuable in the following conditions: In rodent ulcer, where it rapidly controlled the growth; in angioma, where it was curative in the subcutaneous and mixed forms, and produced marked improvement in the port-wine stains; in warts, where there was complete eradication; and in indurative leucoplakia of the tongue and mouth, where in one case after two applications the patient could chew and swallow hard food without discomfort that previously she could not have attempted. In early malignant tumours he did not advise its use. Operation must still have precedence, but after operation it might be used to prevent recurrence.

Dyspepsia and Early Tuberculosis.

Dr. A. DINGWALL FORDYCE drew attention to a form of dyspepsia observed in children, and often difficult to distinguish from early tuberculosis. An accurate diagnosis was all-important to permit of the proper treatment. It was assisted by the facts that in the non-tuberculous condition the digestion of fats, both of the ordinary fats in food and of cod-liver oil, was impaired; in the tuberculous case this capacity was unimpaired, and might be increased. An excess of ethereal sulphates in the urine was found in the simple chronic dyspepsias, and was absent in the tuberculous cases. In a non-tuberculous case the treatment should consist of a reduction of diet, and especially of fatty elements, rest, and the use of calomel in small doses, followed by strychnine. Dr. J. W. SIMPSON said he had found the only useful diagnostic between the two groups of cases to be the result of treatment. In his opinion the v. Pirquet reaction was unreliable. It occurred often in apparently healthy children. Dr. CHALMERS WATSON had met with these two similar clinical groups in adolescents, and in them the digestive capacity for fats was not a reliable guide. Dr. BOYD said that if the absence of ethereal sulphates in the urine of tuberculous cases could be established it would be a valuable sign.

Cases and Specimens.

The following were among the exhibits:—The PRESIDENT: A case of preataxic tabes, with gastric crises occurring at about six weeks' intervals, in one of which operation for appendicitis had been performed; under *x*-ray treatment the patient was improving. Mr. SCOT SKIRVING: A case of left middle meningeal haemorrhage, with paralysis of right arm and leg, and profound unconsciousness lasting two weeks after trephining, and followed by much impairment of memory. The mental and motor pareses have now practically disappeared, but lasted for eighteen months, during which the patient, formerly an expert calculator, bungled simple multiplications, and showed slurring of speech, especially of the letter "s." Dr. BOYD: A patient admitted with general oedema, albuminuria, and scanty excretion of urine, in whom a salt-free diet was followed by disappearance of oedema and profound diuresis. A return to ordinary diet quickly resulted in the reappearance of general oedema, but on exclusion again of sodium chloride the former rapid improvement ensued, and had so far been maintained. Mr. ALEXIS THOMSON: A boy aged 11, in whom the middle third of the humerus had been resected on account of periosteal sarcoma, a portion of the fibula being inserted in its place; *x* rays were being used locally in this case to prevent recurrence

EDINBURGH OBSTETRICAL SOCIETY.

Wednesday, December 8th, 1909.

Dr. F. W. N. HAULTAIN, President, in the Chair

The Rational Puerperium.

DR. J. W. BALLANTYNE read a paper with this title, and owing to the great interest of the subject, the discussion was postponed till the next meeting of the society.

Early Abortion and the Anatomy of the Ovum.

Dr. B. P. WATSON and Mr. H. WADE described and illustrated by lantern slides the histological changes associated with an early abortion and the anatomy of the ovum. The specimen was obtained from a patient aged 24, who had borne two full-time children, of whom the first was alive and healthy and the second had died nine days after birth; then a series of abortions occurred at different stages in the first half of pregnancy. Each abortion was preceded by continued haemorrhage. Anti-syphilitic treatment had had no effect, but syphilis could not be rigorously excluded. Curettage also had been tried without avail. The menstrual losses were always profuse. The specimen consisted of a complete decidual cast of the uterus, containing *in situ* a pea-like ovum 1 cm. in diameter. Pregnancy had not advanced beyond the third week. On section the vessels of the decidua vera, serotina, and reflexa were found to be surrounded by a definite wall, composed of a fibrous tissue deposit and an endothelial proliferation, which reduced the size of the lumen. The changes were comparable with the sclerosis of uterine vessels occasionally found about the climacteric period. At one part thrombosis in a narrowed vessel had led to the necrosis of a lobule. The same pathological condition was found in the vessels of the resting mucosa, obtained from a previous curetting. The glands showed a degree of enlargement and proliferation. From the history and the changes in the resting mucous membrane and decidua, it was suggested as probable that the vascular change was causally related to the series of abortions. Whether it was primarily due to syphilis, or to a localized toxic absorption from the uterine mucous membrane, was left undecided. Serial sections, almost exactly transverse, of the embryo and its membranes were shown. They demonstrated with diagrammatic clearness the structure and relations of the early embryo. Dr. BARBOUR and Dr. YOUNG made remarks on the paper.

GLASGOW SOUTHERN MEDICAL SOCIETY.

Thursday, November 25th, 1909.

Dr. W. K. PEDEN, President, in the Chair.

MR. A. E. MAYLARD, in a paper on *Duodenal ulcer*, pointed out that there was no single symptom pathognomonic of this disease, but a condition of hyperchlorhydria almost invariably preceded the ulceration. Hence the greater prevalence of the condition in males, in whom the first part of the duodenum had an upward direction, whereas in females it was almost transverse. Owing to the frequency of a history of recurrent attacks of "acid dyspepsia," the author had formulated the law that "recurrent hyperchlorhydria is duodenal ulcer." Characteristic pain was not present until actual ulceration had taken place, and then, however it might be explained, the onset corresponded with the time when gastric digestion had proceeded far enough to allow of the food being passed through the pylorus. Nevertheless the pain at night—also characteristic—had no special relationship to the last meal. The occurrence of haemorrhage was purely accidental, and was not as a rule rapidly fatal, because the duodenum as compared with the stomach was only slightly vascular. Usually the haemorrhage was small in quantity, and caused tarry motions of a markedly putrid kind, but occasionally bright red blood was passed per rectum, and this was not easily

explained. Dr. W. MACLENNAN referred to the frequency of chronic pancreatitis in cases of duodenal ulcer. This by reducing the pancreatic secretion partly accounted for the putridity of the tarry motions. Attacks of jaundice were also much more common than in cases of gastric ulcer. The occurrence of red blood in the stools indicated a large haemorrhage, and that all the blood had not had time to be converted in its passage down the intestine. A watch should be kept for "latent haemorrhages," that is, haemorrhages so small as not to cause definite melaena, and the stools should be tested for blood after elimination of red or "underdone" meats from the diet. It should be ascertained that the hyperchlorhydria was real, not simply due to organic acids caused by fermentation, by giving test breakfasts. Dr. J. W. LEITCH suggested that the occasional appearance of red blood in the stools might be due to carbon-monoxide-haemoglobin. The PRESIDENT said that hyperchlorhydria was common in the morning, after a test meal given the previous evening. In suspicious cases systematic testing of the stools for blood should be carried on.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Thursday, December 9th, 1909.

Mr. W. H. H. JESSOP, Vice-President, in the Chair.

Conjunctivitis.

MR. DOYNE described a form of conjunctivitis in which the Meibomian glands were affected with *Staphylococcus aureus*. This gave rise to definite acute attacks, especially after exposure of the eyes. Many cases described as chronic conjunctivitis were due to this cause, as well as many other cases of marginal blepharitis. Mr. HARMAN said that seven years ago he made bacterial cultures from the normal healthy eyes of school children by passing a platinum loop along the mouths of the Meibomian glands, and in every case he got enormous numbers of *S. aureus* and *S. albus*. Mr. DOYNE, in reply, asked members to look out for such cases and endeavour to ascertain the exciting cause, but for five days nothing but water should be used in the eyes.

Guttate Iritis.

Mr. DOYNE also described a condition, which he called guttate iritis, occurring in elderly and gouty persons. It presented the appearance of one or more warts at the pupillary margin of the iris, which came on without any noticeable inflammatory appearances and sometimes disappeared without giving rise to any inflammation. At other times inflammatory symptoms appeared and adhesions to the lens took place.

Congenital Sarcoma of the Orbit.

Mr. M. S. MAYOU recorded the following case of congenital sarcoma of the orbit:

A. P., male, aged 12 days, was admitted to the Central London Ophthalmic Hospital on March 13th, 1908. No eye had been seen since birth on the left side. The patient was a strong, healthy infant, and presented no other congenital abnormalities. The right eye was to all appearance normal. Filling the left orbit and protruding from between the lids, which could not be closed, was a red, slightly oedematous mass. It was irregular on the surface, and covered by the epithelium of the conjunctiva, except where it was exposed in the palpebral aperture, where it had started to ulcerate. There was no enlargement of the preauricular gland, and no eye could be seen. On March 13th the orbital contents were eviscerated, leaving the eyelids in position. The child made a good recovery, the wound granulating and healing over with epithelium. On June 16th, 1908, the child returned to the hospital with a large recurrent mass filling the entire orbit, and bulging forward the upper lid and protruding between them. Complete evisceration of the orbit was performed, the child making a good recovery. After the operation the patient attended the hospital for four weeks, but since then had been lost sight of. The contents of the orbit submitted for examination was hardened in formol. The eye, which was embedded in the upper part of the tumour, had been cut open, and the sclerotic divided posteriorly in several places. It appeared about the normal size, the cornea, anterior chamber, iris, ciliary body, and lens being normal. The condition of the posterior part of the globe could not be made out, but there was no evidence of any cystic protrusion therefrom. No definite orbital structure could be recognized, the whole being involved in the tumour. It was composed of medium-sized spindle cells. The walls of the vessels within the tumour were composed for the most part of its cells. Haemorrhages had taken place into the growth in many situations. The recurrent tumour, examined microscopically, exhibited the same characteristics as the primary tumour, except that the haemorrhages were not so numerous.

The typical microscopical appearances, together with the recurrence of the disease, led the author to believe it to be a spindle-celled sarcoma of the orbit developing during intrauterine life. He had been able to discover the records of two similar cases which exhibited much the same characteristics.

Lymphosarcoma of the Lacrymal Gland.

Messrs. A. P. L. WELLS and M. S. MAYOU, in a paper on lymphosarcoma of the lacrymal gland, pointed out the want of proper classification of tumours of the lacrymal gland. They divided them into those derived from the epithelial, the connective, and the lymphoid tissues. The case which they brought before the society was one of the latter type.

M. A., female, aged 66, was admitted to the Central London Ophthalmic Hospital on January 14th, 1909. She was a strong, healthy woman, no anaemia, no glandular enlargement. There was nothing in her previous history of note. She complained of a swelling which she had noticed for a considerable time at the upper and outer part of the left orbit in the situation of the orbital portion of the lacrymal gland. The surface of the swelling was somewhat irregular and about the size of a large walnut. It was soft, almost fluctuating, rounded in outline, and moderately freely movable. From January to April, whilst under observation, it gradually increased in size, and on admission into the hospital on April 8th there was, in addition to the above symptoms, displacement of the eye downwards, and the tumour seemed to have become slightly attached to the margin of the orbit, which seemed thickened. There was no enlargement of the salivary or lymphatic glands, and no signs of dissemination. On April 9th an incision was made over the tumour, which was found to be encapsuled except in one situation, where it was ruptured. After removal it was seen to be about the size of a walnut and surrounded by a capsule, which was evidently formed from the original capsule of the gland. This was composed of fibrous tissue, and was much thicker in some positions than in others. In some situations it was much infiltrated by the cells of the growth, whilst in one the tumour had penetrated it. Microscopically the tumour proved to be a small round-celled sarcoma.

The authors had been able to find records of eight cases recorded in literature exhibiting much the same characteristics. The points about the tumours were the late age at which they occurred—all the patients being over 38; their slowness of growth, three to four years, and the absence of glandular enlargement. These tumours should be differentiated from other orbital sarcomata invading the gland, and from lymphoid growths found in chloroma and lymphadenoma.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Friday, December 3rd, 1909.

Dr. NEVILLE T. WOOD, President, in the Chair.

MR. HUGH W. BAYLY, after reading a paper on laboratory methods for the diagnosis of syphilis, drew the following conclusions: (1) That syphilitic infection is easily preventable; (2) that such infection can be diagnosed with certainty, on the first appearance of a primary sore, by means of the microscope; (3) that the earlier the treatment is begun the better for the patient; (4) that a positive Wassermann reaction, in the absence of acute diseases, was pathognomonic of syphilis; (5) that the Wassermann reaction formed a very useful guide to treatment, and that antisyphilitic treatment should be continued till a succession of negative results was obtained; (6) that the blood should be examined every six months for a couple of years at least after the first negative reaction was recorded. Colonel LAMBKIN, R.A.M.C., said that for a year all the syphilitic cases admitted into the Rochester Row Hospital had been subjected to Wassermann's reaction. He quite agreed as to its value both for treatment and diagnosis, and quoted cases. Captain HARRISON, R.A.M.C., who had carried out the tests in Rochester Row, hoped that much might be learnt and done for the treatment of syphilis by the use of the Wassermann test in the army on account of the efficient system of supervision which was exercised in these cases. In the case of a negative reaction it was advisable to repeat the test with unheated patient's serum. Mr. J. ERNEST LANE said that he agreed as to the value of

Wassermann's test. It would allow early treatment, and at the same time avoid the treatment of non-syphilitics with prolonged courses of mercury, which had undoubtedly occurred. Mr. C. GIBBS thought caution should be used not to allow positive results to curtail treatment. Mr. R. HAYES hoped that the test would settle the relative values of the modes of administering mercury. Mr. J. C. R. MCDONAGH said there was a tendency for the test to be negative in undoubted syphilitic cases whilst taking mercury, but it was of great value in dealing with women who aborted. He had found a tendency for the test to remain permanently positive in the case of children with congenital syphilis however long they were treated with mercury.

ROYAL SOCIETY OF MEDICINE.

CLINICAL SECTION.

Friday, December 10th, 1909.

Mr. A. PEARCE GOULD, President, in the Chair.

Adiposis Dolorosa.

DR. MACMULLEN showed a case of adiposis dolorosa in a woman aged 62. The condition was first noted five years ago, and was then localized to one arm and circumscribed, but it spread rather rapidly. The changes were preceded by, and associated with, pain along the nerve trunks and hyperaesthetic skin areas. At present the upper segments of both arms, the back, and the sternal region are involved. Thyroid extract had been administered, with a moderate degree of improvement. Dr. A. M. GOSSAGE gave details of a similar case in which thyroid treatment had not effected improvement. Mr. V. WARREN LOW described a case in which an area of hyperaesthesia preceded the onset of subjective pain in the position in which a lipoma finally developed. Dr. LEONARD WILLIAMS commented on the efficacy of thyroid extract in small doses in these cases. A 5-grain dose was in excess of what was required; patients who wanted thyroid most were most intolerant of its action. Dr. F. J. POYNTON instanced cases in which this small dose theory was not borne out. Sir DYCE DUCKWORTH said that the tumours were decreased by thyroid treatment, and the thyroid caused least disturbance when given at night. Dr. J. GALLOWAY said that thyroid extract had very little influence on true cases of Dercum's disease. Dr. F. PARKES WEBER said that many instances of Dercum's disease, published as such, were really cases of lymphatic glandular lipomata.

Rheumatoid Arthritis.

Dr. W. P. HERRINGHAM showed a case of rheumatoid arthritis with albuminuria and great enlargement of the liver. The patient was a boy aged 15. The liver was greatly enlarged, reaching as low as the right iliac crest; it was smooth, hard, and painless. Dr. POYNTON referred to cases in which definite lardaceous changes had been found. In certain cases of Dr. Still's the enlarged livers had been found to be fatty. Dr. PARKES WEBER agreed that the enlargement of the liver was probably fatty. Sir DYCE DUCKWORTH suggested that the patient should be put on full doses of iodide of potassium. Dr. H. D. ROLLESTON said that in Still's disease there was a toxaemia which gave rise to nephritis. Lardaceous disease was known to be due to toxaemias of various kinds, especially in syphilitic suppuration. In exceptional cases the toxaemia in Still's disease might give rise to lardaceous disease of the liver instead of nephritis. Dr. HERRINGHAM said he would accept Sir Dyce Duckworth's advice and treat the patient with iodide of potassium.

Papers.

Mr. J. D. MALCOLM read a paper on a case of cholecystduodenostomy for *Acute emaciation*; and Mr. H. J. PATERSON described *Gumma of the breast* simulating malignant disease. The patient was a woman, aged 26, and when the breast was explored under chloroform it was found to be densely hard, and the histological examination at the time suggested a sarcoma; a complete Halstead operation was performed. Three years after the operation she was in excellent health after treatment by mercury and iodide of potassium. Further investigation of the removed breast demonstrated the inflammatory nature of the swelling.

Exhibits.

The following were among the exhibits:—Mr. W. G. SPENCER: A case of trephining for general epilepsy after an interval of three years, during which the patient had had only one slight fit. Dr. F. J. POYNTON: Two cases of congenital oedema with cardiac defect in mother and daughter. Mr. FREDERICK EVE: (1) A case of arteriovenous aneurysm with exophthalmos following an injury to the head; (2) a case of partial luxation of odontoid process; and (3) a case of transverse fracture of both patellae, with much separation of fragments.

SECTION OF LARYNGOLOGY.

Friday, December 3rd, 1909.

Dr. DUNDAS GRANT, President, in the Chair.

THE following were among the exhibits: Dr. DUNDAS GRANT: Man, aged 41, a considerable smoker, having a peculiar *Erythema of the soft palate* of three months' duration. A bright red rash was distributed over the soft palate, the membrane of the hard palate having a white sclerotic appearance. Although the man had smoked 2 oz. of tobacco per week, an opinion was expressed in the discussion that it might be due to pyorrhoea alveolaris, which was also present. Dr. GEORGE C. CATHCART: A woman, aged 60, who had been hoarse for a month. There was almost complete occlusion of the anterior two-thirds of the larynx, and only a narrow chink between the vocal processes in which were retained numerous crusts. Mr. HERBERT TILLEY: (1) A case of *Tuberculous ulceration of the epiglottis*, treated by amputation of the diseased portion. The patient was a male, aged 43, who in March, 1907, had suffered slight pain on swallowing, loss of flesh, and profuse sweating at night. He also had physical signs of pulmonary tuberculosis, with evening temperature. The stump of the epiglottis was now quite healed, and the patient had gained nearly 3 st. in weight since the operation. (2) The larynx of a man, aged 78, whose right vocal cord was removed for epithelioma in September, 1896. The patient enjoyed good health till a month ago, when he succumbed, after a tracheotomy in other hands, from dyspnoea. A well-developed epitheliomatous ulcer now occupied the left cord, the original right cord and arytenoid remaining quite healthy. The general opinion was that this was a clear case of reinfection after cure of the original disease. Dr. STCLAIR THOMSON: A case in which *Complete stenosis of the larynx*, after diphtheria and tracheotomy, in a boy aged 14 months, had been completely cured by intubations spread over three years. Mr. DE SANTI: A case of laryngeal growth in a woman, formerly shown as one of soft fibroma of the anterior commissure and right vocal cord. She now appeared with a recurrence, sections showing giant cells and one tubercle bacillus, also other signs of laryngeal as well as pulmonary tuberculosis. The question arose whether it was originally a *Tuberculoma* or a simple fibroma which had since undergone tuberculous infection, and what should be the treatment. Dr. WILLIAM HILL: Two cases treated by application of radium bromide: (1) For malignant tumour of neck, showing continued decrease of the swelling after 50 mg. for twenty-two hours; (2) for carcinoma of the gullet; the patient, after six applications since July last, could now swallow almost anything, instead of only liquids and purées, as formerly. Mr. CHARTERS SYMONDS: A patient from whom the frontal bone had been removed for septic osteo-myelitis.

SECTION OF ANAESTHETICS.

Friday, December 3rd, 1909.

Mr. RICHARD GILL, President, in the Chair.

Lymphatism.

MR. BELLAMY GARDNER and Dr. SALUSBURY TREVOR read a paper on lymphatism, accompanied by photographs of frozen sections of the normal newborn infant, shown to demonstrate the position of the thymus gland in relation to the oesophagus, trachea, innominate artery, and aorta at the levels of the sixth cervical, first, third, fourth, and fifth dorsal vertebrae respectively. They also recorded

6 cases of sudden death presenting enlarged thymus gland and general lymphatism.

CASE I.—Boy, aged 13 months, died suddenly while a physician was at the bedside. There was no sign of asphyxia; respiration and circulation stopped simultaneously.

CASE II.—Infant of 9 months, with recently healed eczema, died within an hour after onset of tracheal stridor, with asphyxial symptoms.

CASE III.—Adult, 29 years, congenital imbecile; died suddenly in tepid bath; respiratory and circulatory failure.

CASE IV.—Female, aged 30, died suddenly under a local anaesthetic (tropacocaine) for removal of small cyst in neck. Respiratory cessation; no dyspnoea. Heart failed later.

CASE V.—Male, aged 14, died at the third inspiration of ethyl chloride, given for the adenoid operation. No respiratory obstruction. Respiration failed first, and then the heart.

CASE VI.—Boy of 13, died during operation for adenoids and tonsils under C_1E_2 mixture. No respiratory obstruction. Respiration ceased, while the corneal reflex persisted. This negatived overdose of anaesthetic. The circulation failed rapidly. The thymus weighed 56 grams. There were enlarged lymphatic glands in the infratracheal group, mesentery, and inguinal regions; enlarged Peyer's patches and solitary follicles throughout the intestine. A history of chronic eczema, a severe attack of measles, and abscess in the middle ear was afterwards disclosed.

With reference to diagnosis, it was suggested that the means pointed out by A. S. Warthin might apply in well-marked cases—that is, percussion of the thymic area over the manubrium sterni yielding unusually wide dullness; radiographic examination for wide thymic shadow above the heart; palpable cervical, axillary, or inguinal glands. Dr. DUDLEY BUXTON said that the subject of status lymphaticus in its relation to deaths under anaesthetics was complicated by the existence of great confusion in the clinical records of such cases. The physical signs were so confusing that one was led to believe that the conditions called lymphatism, thymic death, and thymic asthma, were in fact variants of some common dyscrasia, the nature of which was at present unknown. The theory that these conditions were but symptoms of different stages of some toxaemia, probably a lympho-toxaemia, appeared to supply the best explanation. The mechanical theory of death was certainly untenable; cases in which there was definite pressure by the thymus, like those in which thymic asthma existed, presented such well-marked symptoms that any general anaesthetic would be withheld. The cases in which no symptoms existed, but which revealed lymphatic hyperplasia, varied in degree, and no doubt were very common. Until the incidence of such conditions in persons who survived anaesthetics was known, it could not be said whether they were indeed more likely to die during narcosis. A subcommittee should be appointed to study the subject. What appeared to be clear from the record of the cases of death under anaesthetics was that the patients were suffering from a depressed vitality, and that their blood-pressure was abnormally low, this being due in part to the state of the heart muscle. Myocardial disease was a constant accompaniment of, if not a part of, lymphatism. It followed that these persons could not take the usual and safe strength of chloroform without grave risk. Asphyxial complications, trivial in most cases, caused serious results in them. Hence his insistence upon giving exceptionally weak vapours and always supplying oxygen with them. Cases were on record in which the patient who eventually died under chloroform had survived it many times before. Probably in the one instance more, and in the others less, powerful vapours had been employed. All persons who conceivably were of this dyscrasia should be dealt with on the lines indicated, whether they appeared robust, or whether, as in the exophthalmic goitre cases, they gave evidence of definite disease which would probably interfere with normal respiration. It was safer to assume a disease which might not be present than to overlook one which presented no clear objective signs. Dr. SPILSBURY said that too much emphasis had been laid on the size of the thymus gland; thorough microscopical examination of the structures was essential. The heart muscle was always degenerated to some extent in these cases, either fatty degeneration or brown atrophy, or a combination of the two, being an essential feature of status lymphaticus. The condition was not necessarily congenital; in some cases he had found distinct evidence that the thymus had atrophied in the ordinary way during childhood, and grown again later in life. Of all the cases of death during anaesthesia in which he had made a *post-mortem* examination, about 75 per cent. had shown signs of status lymphaticus, and this condition was, in his opinion, a more important factor in causing death than the anaesthetic employed. Dr. HEWITT said that, before putting deaths down to status lymphaticus, it ought to be considered whether the individual cases could not be explained on other grounds. In many cases an asphyxial factor was present before the sudden death occurred; but this might be so slight as to pass unobserved. The heart was really not an important factor in causing death. If the respiration were kept absolutely free and the anaesthesia was not too profound, it was nearly always possible to avert an accident. Dr. LEONARD WILLIAMS believed that status lymphaticus was due in most cases to a want of work on the part of the thyroid gland, and that the other minor glands were enlarged to make up for the lack of efficiency of the thyroid.

MANCHESTER MEDICAL SOCIETY.

Wednesday, December 1st, 1909.

Mr. W. COATES, President, in the Chair.

DR. E. S. REYNOLDS, in a communication on the importance of *Rectal examination* in medical practice, referred only to cases in which symptoms were not obviously due to rectal mischief, but in which rectal examination was essential before a correct diagnosis could be made. He described three groups of such cases: (*a*) Profound and even fatal progressive anaemia, due to slight but repeated rectal haemorrhages; (*b*) malignant disease of the rectum or in the pelvis; (*c*) pelvic abscess secondary to appendicitis. Dr. J. BARNES BURT, in a paper on the etiology of *Heberden's nodes*, analysed 40 consecutive cases, and held them to prove that Heberden's nodes occasioned a variety of conditions in no way connected with one another; that they were always preceded by some condition which led to weakening of the joint ligaments; that the more the joint was used the greater the liability to these nodes. Thus, if the ligaments were weakened constant use of the terminal phalangeal joint led to the last phalanx being tilted backwards—backwards because opposition to the thumb was the chief action of this phalanx. The posterior margins thus received an extra degree of pressure, and would therefore hypertrophy, the pressure being intermittent. The hypertrophy of the most prominent portions of the margins formed Heberden's nodes. In other words, Heberden's nodes were compensatory changes. Chronic gout, rheumatoid arthritis, senile degeneration, and wear and tear might all be important factors in the production of this disease, but just as hypertrophy of the heart was a compensatory change occurring in a variety of conditions, so Heberden's nodes were a compensatory change and not a sign of one specific disease.

Dr. H. H. MCNABB, in a paper on *Convergent strabismus*, emphasized the necessity of curative measures being undertaken at the earliest possible date after the appearance of the squint.

LIVERPOOL MEDICAL INSTITUTION.

PATHOLOGICAL AND MICROSCOPICAL SECTION.

Thursday, November 11th, 1909.

Mr. T. H. BICKERTON in the Chair.

DR. R. J. M. BUCHANAN, in some observations on cytological methods, held that the term "somatic or systemic death" was applicable to the death of the cell as a whole, just as it was to the body as a whole, the systemic cell death taking place prior to disintegration. Recognizing the occurrence of death of the individual in instantaneous rigor or cadaveric spasm, he held that cells could also die in instantaneous rigor, and that this condition was produced and preserved permanently by the most approved methods of instantaneously fixing tissues during their life. By this means cells could be fixed in any phase of their existence, and the appearances coincident with their latest activities be permanently recorded. He drew a distinction between cells which were allowed

to die prior to examination and those dealt with promptly. In this connexion he regarded examination of a cell before its somatic death had had time to take place as examination *in vivo* as opposed to *in vitro*, and remarked that in speaking of experimental work the distinction between *in vivo* and *in vitro* should be qualified in respect of the examination of tissue cells.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.

Tuesday, December 7th, 1909.

MRS. DICKINSON BERRY, President, in the Chair.

THE PRESIDENT read a paper entitled, *What to do with the Feeble-minded*, in which she gave an account of the different classes of children met with in the special schools for the mentally defective. These included backward children (who in Germany would be placed in intermediate schools); children with some special defect—for example, word-blindness—and various grades of feeble-minded children. The speaker said that though the children improved under the special training, the ultimate results were not encouraging, owing to the absence of any system of control or supervision after school age. Many of the children, as they grew up, joined the ranks of the chronically unemployed or found their way to the workhouses or gaols. Some were found later in the homes for mentally defective girls with illegitimate children. The proposals of the Royal Commission on the Feeble-minded were then considered, with special reference to the suggested powers of detention and to the systems of colonies and boarding-out. The latter plan, under good supervision, had been very successful in Belgium. Dr. ALICE JOHNSON described some *Foreign colonies for the feeble-minded*. One of these was the Waverley school in Massachusetts, which contained 1,050 inmates, housed in several blocks, each of which had a matron acting as home mother. The special features of this successful colony were the careful grading of the different classes of the feeble-minded, the bright and cheerful atmosphere that was cultivated, and the great attention paid to the physical condition of the children. From this school the boys could be sent on to a farm colony, where they did all kinds of agricultural work. An account was also given of a large colony at Ursberg, in Bavaria, consisting of idiots, mentally defective people, epileptics, deaf and dumb, crippled and blind persons, and other sick people. They were taught various trades, and the colony was almost self contained. The inhabitants carried on a bakery and a brewery, built their own houses, generated their own electricity, etc. The speaker pointed out that the colony system was the ideal treatment for the feeble-minded, who nearly always deteriorated if allowed to return to their homes. Miss WOODWARD gave an account of 4 cases of *Pernicious anaemia* (two men and two women) recently admitted to the Royal Free Hospital. They conformed to the type of the idiopathic pernicious anaemia of Addison, no cause for the disease, such as gastric carcinoma or intestinal parasites, being found, though two had pyorrhoea alveolaris. They all showed a red count of under one million with a high colour index; three had a leukopenia with a relative lymphocytosis; the fourth (who had pyorrhoea) had a leucocyte count of 5,000, of which 86 per cent. were polynuclears. This was probably due to a terminal infection; a Gram-positive diplococcus was grown from the blood just before death. *Post-mortem* examinations were made on 3 cases, and revealed the usual changes. Atrophy of the stomach glands was found in 1 case; in the same case the spleen only weighed ½ oz. In 1 case, otherwise typical, the bone marrow from the femur contained numerous large lymphocytes resembling those seen in the blood in acute lymphatic leukaemia.

DR. GASLON FRANCOIS PETITJEAN, of Brooklyn, a French physician who had lived in the United States for many years, recently died at the age—stated on his own authority—of 104 years.

THE Devon County Council has decided to arrange for the tuberculosis exhibition of the National Society for the Prevention of Consumption to be displayed for one week each at Barnstaple, Exeter, and Plymouth or Devonport, provided these places make contributions.

Reviews.

THE OXFORD MUSEUM.

Now that the Oxford Museum has celebrated its jubilee, and the echoes of the strife which surrounded its inception (and did not cease when it was completed) have almost died away, it is right that its history should be written. Dr. VERNON has supplied the deficiency, and we cordially recommend his small *History of the Oxford Museum*[1] to those of our readers who are interested in the development of scientific teaching in England, and especially to those who are interested in Oxford.

The narrative commences with a sketch of the early years of the seventeenth century, made brilliant by the names of Sydenham, Christopher Wren, Boyle, and Harvey. This brief period was succeeded by the triumph of unscience, when the public orator did not hesitate to make a violent attack on the members of the then young Royal Society "as underminers of the university." The teaching and study of scientific subjects at Oxford was at this time at its lowest ebb, though names remembered with gratitude occasionally emerge from the surrounding gloom. Radcliffe, Savile, Ashmole, Lee, and Lord Litchfield, made benefactions to the University for the encouragement of the study of science and of medicine, but the awakening did not come until nearly the middle of the nineteenth century. Amongst those who then took an active part in urging the necessity for increased facilities for research and the teaching of science were Daubeny, Duncan, Walker, and Henry Acland. Their ideal was to give to Oxford an institution where the great truths of Nature could be investigated and taught. All that showed the relation of this earth to the infinite universe, all that concerned man and his dwelling-place, and all that affected him in health or in disease, was to be studied there. The centre was to be a great library, where should be stored all that the greatest minds have contributed to the knowledge of our material world. Each subject was to be represented by its special department, and to have its appropriate laboratories, class-rooms, and museums. Around the central building were to be observatories, institutes of comparative anatomy and pathology, physics, chemistry, and physiology—in fact, whatever was necessary to give intelligent students the opportunity of studying every department of natural science.

The protagonist of the fight was young Henry Acland, who, while yet a medical student, began what then seemed an almost hopeless contest. The ideals of those who joined with him roused bitter opposition. Nothing illustrates the state of feeling better than the answer given by Dean Buckland, the eminent geologist, when asked to sign the original petition to the University in favour of the foundation of the museum. The story is well told by Dr. Vernon. In a letter to Acland dated December 27th, 1847, Dean Buckland wrote: "Some years ago I was sanguine, as you are now, as to the possibility of natural history making some progress in Oxford, but I have long ago come to the conclusion that it is utterly hopeless. . . . I therefore return the paper, which I think it would be useless mockery to put my name to."

In this connexion it is interesting to remember that Pusey, the renowned theologian, although he had expressed the opinion that the study of natural science led "to a temper of irreverence and even arrogance inconsistent with a truly Christian character," not only supported those who were endeavouring to bring about the *renaissance* of scientific teaching in Oxford, but contributed probably more than any one else to the victory which was ultimately won.

How far the ideals of those who were concerned in making the museum an accomplished fact have been justified may be learnt from Dr. Vernon's little book. Since its foundation there have been added to the original building a new library, and additional laboratories for the study of chemistry, physics, physiology, anatomy (human and comparative), pathology, electricity, and anthropology. Thus all those departments which it was hoped would centre round the museum have one by one been added,

[1] *A History of the Oxford Museum.* By H. M. Vernon, D.M., Fellow of Magdalen College, Oxford, and K. Dorothea Vernon. Oxford: At the Clarendon Press. 1909. (Fcap. 8vo, pp. 128, ten plates, with plan of the Museum. 1s. 6d.)

with the exception of that of botany, which, unfortunately, has not yet been accomplished.

It is impossible to give here a record of all the early struggles to make the teaching of science a living factor in the university, or to give a complete account of the first beginnings of teaching or research in each of the several branches of knowledge. Mention must, however, be made of the sanitary and pathological laboratory attached to the department of medicine, in which, among others, Pode, W. F. Donkin, and E. Ray Lankester worked. This laboratory, which was carried on solely at the expense of the Regius Professor, has long been superseded, but it was the commencement at Oxford of the pathological and hygienic work which has in recent years been so largely developed. It may be mentioned that the account of the jubilee of the Museum, held last autumn, is mainly taken, with due acknowledgment, from the report which appeared in the JOURNAL of October 17th, 1908.

The foundation of the Oxford Museum has given to many generations of students opportunities for work which it would be difficult to equal, and it may not be out of place to recall Mr. Ruskin's words, sent as a message "to his friends in the Oxford Museum" on the occasion of the opening of the new pathological department in 1901:

> May God bless (he said) the reverent and earnest study of Nature and of Man, to His glory, to the better teaching of the Future, to the benefit of our country, and to the good of all Mankind.

All who are in touch with scientific work at Oxford have reason to be grateful to Dr. Vernon for having gathered together the scattered threads of a narrative so full of interest, which he has made available in his history of the Museum. From its moderate size and cost, it should command a wide circle of readers.

Where so much praise is well deserved, it may seem invidious to criticize, but we hardly think that the illustrations (good as some of them are in detail) do justice to the general architecture of a building on which so much care and skill were expended. We hope that in future editions it may be possible to improve them.

The book seems singularly free from error, but we would venture to point out that on page 42 it is stated that Acland was appointed to the Lee's Readership in 1847, "when he had not even taken his M.D. degree." He was in fact appointed in 1845, when he was still a medical student, and lectured to some of those who subsequently examined him. These are small points. Taken as a whole, this admirable little memoir tells the tale of the Oxford Museum well, and with sympathy for the peculiar difficulties which surrounded its foundation. We hope that it may enable many besides those who are working at the Museum to realize the advantages which are now available for all who care to use them, and the effort and self-sacrifice which were needed to obtain them.

PSYCHONEUROSES.

THE ten chapters comprising the volume entitled *Hysteria and other Psychoneuroses*[2] have been translated by Dr. A. A. BRILL from three different volumes of Professor FREUD'S works published within the last fifteen years. The first four—on the psychic mechanism of hysterical phenomena, the case of Miss Lucy R., the case of Miss E. v. R., and the psychotherapy of hysteria—have been taken from the *Studien über Hysterie* of Breuer and Freud; and the remaining chapters, dealing with "defence-neuroses," "anxiety-neuroses," psychotherapy, and the share of sexuality in the etiology of the neuroses, from the first two volumes of Freud's *Sammlung kleiner Schriften zur Neurosenlehre*, a collection of small articles upon the neuroses. The wide range of this selection has the advantage of illustrating the gradual evolution of Professor Freud's views and teaching. At the same time, for lack of authoritative revision, the earlier chapters import a certain amount of misconception as to his actual and present views. These latter, however, are fully explained in the concluding chapters, and we only touch upon this in passing by way of caution. The views and speculations of this original thinker, which have exerted a powerful influence on modern hypotheses as to the mechanism and nature of hysteria and allied psychoneuroses, are already widely known. A brief quotation from the chapter on the share of sexuality in the etiology of the neuroses gives, perhaps as succinctly as is possible, the fundamental conceptions of the theory which is everywhere now connected with Professor Freud's name:

> Together with J. Breuer, and in addition to observations which he had made on his hysterical patients fully a decade before, I have studied the mechanism of the origin of hysterical symptoms by the awakening of memories in hypnotic states. We obtained information which permitted us to cross the bridge from Charcot's traumatic hysteria to the common non-traumatic hysteria. We reached the conception that the hysterical symptoms are permanent results of psychic traumas, and that the amount of affect belonging to them was pushed away from conscious elaboration by special determinations, thus forcing an abnormal road into bodily innervation. The terms "strangulated affect," "conversion," and "ab-reaction" comprise the distinctive characteristics of this conception.

To the above should be added a further axiom: In a normal *vita sexualis* no neurosis is possible."

In pursuing his earlier psycho-analytic researches, Professor Freud found invariably that the "strangulated" or "suppressed" affect was of a sexual nature, and that it was not normally "ab-reacted," because of its unbearable character. The intolerable idea was pushed from consciousness (repression) into the under-world of the mind, where, however, it found some bodily outlet (conversion) other than that appropriate to it. The somatic symptoms and signs of hysteria are thus evidence of the "conversion" of psychic traumata of the sexual life occurring, as a rule, in childhood. This at once explains Freud's dictum that "the hysteric suffers mostly from reminiscences," or, as Boris Sidis says, from "resurrected moments." Lately Professor Freud has largely modified his original position. He states that by chance his former material furnished him with a great number of cases in which infantile sexual trauma played the main part. Since then he has learnt that many of these "seduction fancies" are confabulations, attempts at defence by the subjects against the reminiscences of their own sexual activities, the "traumatic" element of the infantile sexual experiences disappearing with this explanation. Further, his observations have shown him that the results do not depend on the experiences themselves, but on whether these are "repressed" or not. Here Professor Freud strikes upon the individual or constitutional factor, to explain which—whether it be called the "neuropathic disposition," or, with Professor Freud, the "sexual constitution"—his theory is quite useless without extraneous help. This constitutional factor is the fundamental question; for the "why" always antedates the "how." The theory explains nothing of the essence of hysteria; on the other hand, it says a great deal in a very interesting manner as to its mechanism. As a psychological theory it is coherent in itself, and is compatible with, and indeed elucidative of, subconscious processes. The proof of a theory, however, lies in the results of its application. In answer to critics, Professor Freud points to the results of his method of psycho-analysis. This method, practised and praised by Jung, Riklin, and many others, is explained in the present book. Professor Freud says he long ago discarded hypnotism and suggestion, and explains the difference between these and psycho-analysis by an adaptation of Leonardo da Vinci's ingenious contrast of painting and sculpture. The one works *per via di porre*, placing little pieces of paint where they were not; and the other *per via di levare*, taking little pieces from where they were. So, suggestive therapy acts *per via di porre*, by putting on something—the suggestion; analytic therapy acts *per via di levare* by trying to remove something—the pathogenic idea.

Those who are acquainted with Professor Freud's works in the original—books by no means easy to read owing to the inherent difficulties of the subject and the changed connotations given to terms consequent upon new conceptions—will best appreciate the value of this collection of papers. There can be no doubt that they will meet with the grateful recognition they deserve.

[2] *Selected Papers on Hysteria and other Psychoneuroses.* By Professor Sigmund Freud. Authorized Translation by A. A. Brill, Ph.D., M.D. Nervous and Mental Disease Monograph Series. No. 4. New York: *Journal of Nervous and Mental Disease* Publishing Company. 1909. (Roy. 8vo, pp. 206. $2.00.)

NEUROLOGY.

So satisfactory is the theory that many nervous diseases are due to the destructive influence of toxins or other poisons on the central or peripheral nervous systems, that

the search for further causes for the occurrence of these disorders is often omitted. In tabes and general paralysis, for example, the toxins of Schaudinn's *Treponema pallidum* may be held responsible; the peripheral neuritis and other nerve degenerations so commonly met with in patients suffering from alcoholism, gout, diabetes mellitus, or pernicious anaemia, seem to meet with a quite legitimate explanation in the assumption that they are the direct consequences of poisons or poisonous products of metabolism circulating in the blood. This assumption having been made, the mind tends to regard the etiology of such nervous diseases as settled for good and all, and to look no further for causes to explain their occurrence. According to Dr. LUDWIG EDINGER,[3] however, such views entirely overlook one of the most important factors in the production of many nervous diseases, and that is the degree of the functional activity demanded of the affected nerves or nerve tracts. The nerve cells of the central nervous system, as is well known, contain substances or food materials that are used up when the cells are functionally active, or at work. In health, the consumption of these food materials is made good, from day to day, by new supplies that take the place of what is consumed; although, even in health, exceptional cases do occur in which excessive calls being made on the activity of certain of the nerve cells, the supply of new food material to them falls short of the demand for it, and a neuritis from over-exercise is the result. As an instance of this Dr. Edinger quotes the case of a patient with optic atrophy sent to him as an example of early tabes, in whom the atrophy was caused by over-use. The patient's daily task was to examine some twenty thousand eggs to see if they were good, by holding them up to a strong light and looking through them, and there was no reason for believing that he was either tabetic or syphilitic. Dr. Edinger holds that this relative deficiency in the supply of food material to the nerve cells is the immediate cause of many nervous diseases; or, in other words, that many nervous diseases are brought on by over-exercise of the part of the body affected. It must, of course, be understood that amounts of use or exercise that would be normal in healthy persons may be excessive in patients with syphilis or any other of the general diseases already mentioned. As a further instance of the effect of over-use in determining the distribution of the paralysis in a toxic neuritis, Dr. Edinger cites the wrist-drop of lead palsy. Here it is the extensors of the wrist that are paralysed mainly, and much ingenuity has been exercised by neurologists in search of an explanation for the fact that the supinator longus and the long abductor of the thumb characteristically escape unparalysed. The true reason, he thinks, is this—that these two muscles are hardly used at all in the act of applying oil paint, owing to the way in which the brush is held by the painter; whereas the extensors and flexors of the wrist are set in action at every stroke of the brush, and the extensors, being naturally weaker than the flexors, are the first to give way. Many other examples drawn from patients with congenital, hereditary, or acquired nervous diseases could be quoted from Dr. Edinger to show how over-exercise, whether relative or absolute, determines the form in which such disorders find clinical expression. His views are of great interest to the neurologist and clinician, although they cannot now be said to have the additional attraction of novelty, for he has been urging them on the medical profession for some fifteen years. It is particularly from the points of view of prophylaxis and treatment—departments in which the recent advances of neurology have not been very evident—that his work merits attention.

Owing to the fact that the nerve cell has no power of reproduction, diseases involving extensive destruction of nerve tissues are among the most hopeless of maladies from the point of view of recovery. As a rule tabetics and paralytics of all kinds either sit down under their troubles or struggle on as best they can; the subjects of tics often receive no treatment save general tonics and a kindly admonition not to do it again, and aphasics grope their way back to fellow speech almost unaided. Yet something has been done here and there to help the lame dog over the stile, or, at any rate, to teach him how to circumvent the difficulty. Deaf-mutes, for example, have been taught to speak by linking articulative and motor speech processes to senses other than those of hearing; Fraenkel's work in re-educating ataxic tabetics is well known, as are also the results of nerve crossing in paralyses as carried out by Robert Jones, of Liverpool, and in many other directions a most promising and helpful field of treatment is opening up. As Professor H. LAVRAND, of Lille, says in an able and useful little book on physical and mental re-education,[4] the results obtained in cases such as we have mentioned are made possible by three well-known facts: (1) That organic lesions are, as a rule, less extensive than the symptoms would make appear; (2) that the function of nervous tissue is of great plasticity, one centre being able to complement another and even take its place; and (3) that if it be true that images stored up in the mind have the capability of motor expression; then, inversely, bodily gestures and attitudes are capable of awakening the mental images corresponding to these gestures or attitudes. Dr. Lavrand cites hemiplegic paralysis as an instance in which the symptoms are in excess of the actual organic lesion, and doubtless in many of these cases the functional disturbance of adjoining cerebral areas, or what might be termed the "penumbra" of the lesion, may be either removed by appropriate exercises and mental suggestions, or confirmed and deepened by the absence of treatment. It is, however, upon the remaining two conditions that the success of re-education must mainly depend, and of these two more particularly upon the remarkable capability of nerve tissues to take on vicarious functions. Dealing with this matter, Dr. Lavrand's suggestions as to re-education in locomotor ataxia, in paralyses, tics, aphasia, and deaf-mutism are thoroughly practical and helpful. The book is small, and gives only the broad outlines of the treatment appropriate to patients in each class, but enough is said in it to show that there is here a very important and promising department of treatment still awaiting further systematic study.

How much and yet how little modern physiology knows about the functions of the cerebellum is well illustrated by Dr. BING'S pamphlet on the significance of the spino-cerebellar system.[5] Luciani holds that the three chief symptoms of cerebellar disease are atony, asthenia, and astasia, believing that the cerebellum merely strengthens the activity of the other motor centres; Thomas sees in it a reflex centre for equilibration; Lewandowsky thinks it is the organ of muscular sense. The author details the anatomy of the dorsal and the ventral spino-cerebellar tracts, and goes on to describe his own experiments. In one series the spino-cerebellar tracts were severed in the neck on one side of the spinal cord or on both; in a second, destruction of the terminations of these tracts in the superior vermis was attempted, the actual cautery being used. The symptoms manifested by the animals—dogs—operated upon in these two series were very similar; their static equilibrium was upset, giving rise to longitudinal and transverse swaying as the animal stood, and in addition retropulsion was observed. The hind legs were more affected than the fore, and the principal movements of the limbs were those most impaired; at the same time the tone of the muscles was lowered. Bing discusses at full length the bearing of his experimental results on the different views held as to the functions of the cerebellum by Luciani, Thomas, Lewandowsky, Munk, and others; he holds that the integrity of the spino-cerebellar tracts is indispensable for the proper action of the cerebellar mechanism, and that lesions of these tracts produce hypotonus and inco-ordination of the principal movements of the limbs, particularly at the pelvic and shoulder girdles. He gives over 170 references to literature, and his pamphlet is quite adequately illustrated.

With the appearance of Part II of Vol. iii the section of neurology in the eleventh edition of *Quain's Elements of Anatomy* is completed, and it forms one of the most

[3] *Der Anteil der Funktion an der Entstehung der Nervenkrankheiten.* Von L. Edinger. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1908. (Sup. roy. 8vo, pp. 67; 5 figures. 2s. 3d.)

[4] *Ré-éducation physique et psychique.* By Dr. H. Lavrand. Bibliothèque de Psychologie et de Métapsychie. No. 13. Paris: Bloud et Cie. 1909. (Cr. 8vo, pp. 124. Fr. 1.50.)

[5] *Die Bedeutung der spino-cerebellaren Systeme.* Von Dr. R. Bing. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1907. (Sup. roy. 8vo, pp. 95, with 8 figures in the text and 6 plates. 6s. 10d.)

exhaustive, elaborate, and best illustrated accounts of the nervous system and sense organs which has been published.[6] The macroscopical portions of the present volume have been revised and added to by Professor SYMINGTON, and the microscopical parts are the work of Professor SCHÄFER. Both parts have been brought thoroughly up to date, and many new and instructive illustrations have been added or introduced in the places of figures which have become obsolete or insufficient. Many of the new figures have been drawn from the authors' preparations and others have been borrowed from monographs and other textbooks. All are well chosen, and they are so numerous and so well described that they constitute in themselves an atlas of the macroscopical and microscopical anatomy of the parts dealt with. In its present form the volume is probably too full, too detailed, and too little dogmatic to appeal to the average student of medicine as a textbook, but to the student who is working for the higher examinations, to practitioners, and to specialists it will be of the utmost value, and it will be welcomed by every one who wishes to revise his knowledge of the nervous system and to become acquainted with the more recent results of neurological work.

SMALL-POX AND VACCINATION IN BRITISH INDIA.

THE volume by Major G. P. JAMES, I.M.S., entitled *Small-pox and Vaccination in British India*,[7] is certain to attract a great deal of attention, and appearing at a time when energetic attempts are being made in this country to undermine the belief in vaccination, and when as a result of relaxation of the vaccination laws the practice of vaccination is being neglected on a large scale, a wide circulation of this work could not fail to exert a beneficial influence on thoughtful readers. In the preface Major James expresses the hope that "the subject has been dealt with in such a manner as to render it interesting to all classes." This result has undoubtedly been attained. The book is fascinating and convincing, and will take a prominent place as a book of reference among works dealing with the important subject of preventive medicine. Major James has reduced the enormous mass of material at his disposal into the limits of a volume of a little over one hundred pages, and the interest of the reader is sustained throughout.

The first two chapters deal with the subject of small-pox in India in prevaccination days when inoculation of small-pox was in vogue, and the difficulties created by racial peculiarities, superstition, ignorance, and religious convictions are narrated in an interesting way. These chapters are followed by a brief history of vaccination in India. The fourth and concluding chapter states, "The proof of the value of vaccination in India." This chapter contains a mass of statistical evidence presented in a clear and concise manner the assimilation and understanding of which is greatly aided by fourteen graphic diagrams. This portion of the work is a striking and notable feature, and Major James's reputation as Statistical Officer to the Government of India in the Sanitary and Medical Departments will be greatly enhanced by this laborious and lucid effort. Throughout he anticipates and meets with cogent answers various arguments which his experience of anti-vaccinators teaches him may be advanced against the points he makes. Referring to the difficulties encountered in India in securing general vaccination, Major James says:

> The great majority of the people, while being exceedingly ignorant and childish, are so apathetic and regard the dangers of future events so lightly that even where general intelligence has advanced to an extent sufficient to realize that it is better to be vaccinated than to have small-pox, they adopt the measure only when it is granted to them entirely free of cost and is brought almost to the doors of their houses.

These remarks are by no means inapplicable to many in our own country, whose intelligence, as displayed on such matters at least, is not higher than that of the natives of India

Step by step is built up one of the most convincing arguments in favour of vaccination ever published. The evidence produced is sufficient both in quantity and kind to enable the reader to appreciate in some measure the great blessing that vaccination has conferred upon the almost countless multitudes forming the population of India.

The numerous charts which give special point to the statistical matter are very neatly executed, but an excellent device of the author has been frustrated by the printer and the bookbinder. Chart XI gives the total number of vaccinations performed in British India annually from 1877 to 1907; Chart XII gives the annual mortality from small-pox per million, 1868 to 1907. The former is stated in the text to be a transparent sheet facing the latter, so as to show at a glance, when superimposed, the decline of small pox mortality coincident with the progress of vaccination. As a matter of fact, Chart XI is not on really transparent paper, and instead of appearing opposite Chart XII is inserted several pages further on. The book is of such merit and importance that we predict the first edition will soon be exhausted, and the failure to carry out the author's instruction in the matter just mentioned can easily be remedied in later editions.

NOTES ON BOOKS.

THOSE for whom German translations of works originally written in English have any attraction now have an opportunity of reading in German the monograph of CHARLES BECK, of New York, on surgical diseases of the breast and their treatment. Dr. SCHRÖDER,[8] of Dusseldorf, its translator, attaches to the German edition a preface to the effect that he undertook the task because he regarded Dr. Beck's exposition of his views on the subject as of too high scientific interest to be overlooked by German surgeons. He expresses, too, a hope that they will find perusal of the pages of his translation as useful as he himself has found their composition enjoyable. Possibly this will prove to be the case, though we did not find the original work entirely satisfactory, the treatment of different points being very unequal in value. In its German form the book looks well. There is an adequate, indeed large, number of illustrations in black and white, in addition to a good many diagrams in which colour has been used by way of bringing out points of special importance. For the fact that his ideas have not been unduly disguised in their German dress Dr. Beck himself vouchsafes.

DIARIES.

We have received from Messrs. John Walker and Co., Ltd., Farringdon House, Warwick Lane, E.C., samples of their diaries and pocket calendars, which range in size from a miniature volume not much bigger than a postage stamp to a calendar showing a page at an opening. They are all remarkable for neatness of printing and excellence of finish. They are to be had in various kinds of binding, and loose covers can be obtained for which refills can be purchased in future years. All but the smaller sizes contain a tabular almanack for 1911, and towards the end of the year such a table is often found a very convenient addition to any pocket calendar. The prices vary with the get-up, and the firm will supply a price-list on application.

The series of Letts's diaries published by Cassell and Co. is very extensive, and we notice among those specimens sent us some excellent desk diaries of various sizes. An octavo with two days on a page (No. 101) appears to be particularly convenient for ordinary purposes. The larger rough diary (No. 31), three days on a page, will be found useful as a desk-appointment book. The medical diary is of the ordinary type, with a week on the left-hand page and places for the names of twenty-eight patients on the opposite page. There are a few short articles upon points with regard to which information may be required in an emergency.

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[6] *Quain's Elements of Anatomy.* Eleventh edition. Vol. iii, Neurology, Part II. Edited by E. A. Schäfer and J. Symington. London: Longmans, Green and Co. 1909. (Roy. 8vo, pp. 392, 1 plate, and 321 figs. 15s.)

[7] *Small-pox and Vaccination in British India.* By G. P. James, M.D.Lond., D.P.H., Major, Indian Medical Service, Statistical Officer to the Government of India in the Sanitary and Medical Departments; formerly with the Royal Society's Malaria Commission in India. Calcutta and London: Thacker, Spink and Co. 1909. (Cr. 4to, pp. 118; 14 diagrams. 7s. 6d., 6 rupees.)

[8] *Die Chirurgischen Krankheiten der Brust und ihre Behandlung.* Von Dr. Carl Beck, aus dem Englischen übersetzt von Dr. Schröder. Berlin: Verlag von August Hirschwald. 1910. (Pp. 486.)

The *Garden Life* Pocket Diary, issued by the periodical of that name, shows a week in an opening, and gives monthly gardening notes and hints upon such subjects as the growing of chrysanthemums and roses and various other matters interesting to gardeners, professional or amateur.

ANNUALS.

Whitaker's Almanack for 1910[9] has been revised to November 20th, and was "published at sunrise on December 9th," on which day we find, on reference to this year's issue, the sun rose at 7.55 a.m. There are indeed few of those sudden disconcerting questions, which every schoolboy ought to be able to answer, that cannot be answered from this miniature encyclopaedia. The number of pages has not been increased, but space has been found for an enlarged list of secondary schools, and a more detailed account of Parliamentary procedure, and the principal events of the year. The volume contains, as usual, a number of articles written for this issue on such subjects as the Report of the Royal Commission on the Poor Laws, the Children's Charter (the Children's Act, 1908), old-age pensions,, aeronautics, and the navy and army. In the article on the army in 1909 we read:

> In the Army Medical Corps, recent improvements in the pay, status, and educational facilities of officers are bearing excellent fruit. Probably no other army is as well equipped in this branch, and the nation at large has to thank the corps for researches resulting in the practical extermination of more than one deadly disease.

With regard to the Regular Army Reserve, it is stated that there is only a slight deficit in the Royal Army Medical Corps, but it is added:

> Gaps in the R.A.M.C. reserve are being filled by the dubious expedient of transferring infantry reservists, and giving them a brief special instruction.

A note prefixed to the new edition for 1910 of *Who's Who*[10] impresses upon the reader that he ought also to provide himself with *Who's Who Year Book*,[11] a smaller volume which is described as a key to the larger. The *Year Book* consists of tables which were, in fact, the original nucleus of *Who's Who* when it was first published in 1849. The book developed into the biographical annual which most people know, and became so stout that it was thought better to detach the tabular matter. The tables range over a wide field, from the dates of race meetings to lists of university staffs and learned societies. *Who's Who* itself remains as before—an extraordinarily complete guide to people of the day, men and women about whose career or occupations, for one reason or another, information may often be desired.

Another volume of the same series of handbooks is *The Writers' and Artists' Year Book*.[12] It contains tables of journals, magazines, and publishers—English, Canadian, and American (we take leave to alter the order in the table of contents)—who are open to receive contributions, with some particulars as to the class of contributions invited. In the preface the editor gives the excellent advice, "Whenever it is possible, have the manuscript typewritten; if not, very clearly written, with plenty of space. Pack your manuscript flat, not rolled or folded." An American editor some time ago published a piece of advice to contributors in the following terms: "Send your manuscript flat, if you can; folded, if you can't; but shoot yourself before you roll it."

The Englishwoman's Year Book and Directory,[13] which may also be counted as belonging to this series, is now in its twenty-ninth year of issue, and we may feel pretty sure that the demand for it is increasing as the unmarried daughter looks about herself to find employment for her leisure or her needs. There is a section on medicine, pharmacy, and dentistry. In an introductory paragraph on general prospects the opinion of the British Medical Association, "that the principle that no distinction be made on the ground of sex as regards the amount of the emoluments to be paid lady practitioners be affirmed," is quoted. It seems well, however, to reproduce also the terms of the recommendation of the Association with regard to prospects and remuneration:

> Regard must be had to the fact that the time spent in the work of medical inspection of school children can, in the majority of cases, lead to no future in this special department; that the majority of those engaged must ultimately revert to other departments of medical practice, and that the time spent in the medical inspection of school children will afford very little useful experience for future practice.
>
> Consequently practitioners who at the commencement of their career undertake this whole-time work will be justified in requiring a higher rate of remuneration than that they would receive in posts affording valuable experience, such as those of assistants to general practitioners or of house-surgeons, and the minimum whole-time salary should be from £250 to £300 per annum.

The account of the way in which a medical training can be obtained is very condensed, but accurate so far as it goes. There is a special section on medical women in India, but not on medical missions; we suggest that in a future issue this omission should be supplied, as there is a certain risk of women taking up medical missionary work without fully understanding the nature of the work, the amount of remuneration, and the cost of living.

[9] *Whitaker's Almanack, 1910.* London: J. Whitaker and Sons, Limited. (Cr. 8vo, pp. 988; 2s. 6d.)

[10] *Who's Who, 1910.* London: A. and C. Black. (Cr. 8vo, pp. 2162. 10s.)

[11] *Who's Who Year Book, 1910.* London: A. and C. Black. (Cr. 8vo, pp. 170. 1s.)

[12] *The Writers' and Artists' Year Book. A Directory for Writers, Artists, and Photographers, 1910.* London: A. and C. Black. (Cr. 8vo, pp. 136. 1s.)

[13] *The Englishwoman's Year Book and Directory, 1910.* London: A. and C. Black. (Cr. 8vo, pp. 408. 2s 6d.)

MEDICINAL AND DIETETIC PREPARATIONS.

Turkish Sour Milk.

THE facilities for obtaining supplies of milk soured by the action of the Bulgarian lactic bacillus are rapidly increasing, and persons wishing to take it regularly or occasionally can either prepare it at home by means of some of the cultures of bacteria, on which we have previously reported, or can obtain it ready for consumption from several sources. We have received a sample of the preparation, stated to be "the true Turkish curdled milk," supplied under the name "Yaourte" by Mrs. Marsh (Overshot Mill, Colne Engaine, Essex). We are informed that the cows from which the milk used is obtained have all passed the tuberculin test, and that the milk is sterilized for some hours before adding the lactic ferments and incubating in the jars, previously sterilized, in which it is sent out. The jars are closed with an air-tight cover, and it is claimed that the contents will keep in perfect condition for any length of time. Our determination of the acidity of the sample submitted showed it to correspond to 1.02 per cent. of lactic acid, which is practically the maximum obtainable; the taste was free from bitterness, and decidedly agreeable, the pleasant flavour being ascribed to the compounds produced by the two yeasts included among the ferments employed, which are stated to be *Streptobacillus lebenis*, *Streptococcus lebenis*, *Saccharomyces lebenis*, *Mycoderma lebenis*, and *Bacillus lebenis*.

THE RELATIONS OF THE LAITY AND THE MEDICAL PROFESSION.

By Mrs. HODGKINSON,
Editor of the *British Health Review*.

(Concluded from page 1682.)

THE question of fees is a sore subject both to the profession and the public. I approach it with trembling, but in these Jacobin days nothing is sacrosanct, not even that mythical but pleasing coin—the guinea of the consulting room. We are well aware that our advisers must live. What we beg to remind them is that we also must live, and in a double sense where they are concerned. Frankly, we think surgical fees are too high. Let me not be reminded of Whistler's rejoinder to that much pilloried Q.C.: "Sir, I did not charge for an hour's work; I charged for the experience of a lifetime." I know some one will cite this if I do not anticipate him, but let me point out the difference. You need not buy a Whistler; you may not even want to do so. Some persons might crassly prefer that "Battersea Bridge" should be in no nearer neighbourhood to them than the Tate Gallery. But when confronted with the need for operation, and you are given the choice of your money or your life, you are unable to stand upon the order of your bargaining however lean your purse may be. I positively decline to waste space in eulogizing the charity of many medical men. It needs no praise, for it is known and respected. But suppose we imitate the unemployed, and say, "Curse your charity; what we want is a lower and more definite scale of fees." Might there not be some reason in that claim? The right-minded patient hates pleading poverty, and is dreadfully harassed by the different standards obtaining. Sir

Pompey Partington may demand £150 for a snip which Mr. Cutler Walpole may willingly perform for half the money. It is a solemn truth that the patient entering the consulting-room has not the remotest glimmer of reason to guide his expectations as to the drain on his resources, and this, at a time anxious enough in itself, adds another dread to the black flock already preying upon his vitals. How timidly he puts the question: "And may I ask, Sir Pompey, what—ahem—your fee is?" And in what trembling he waits the crisp and clear-cut reply: "My fee in such cases is invariably——" Goodness knows what, but something that in no sense necessarily represents its actual though it may its market value.

If (unless patients arrive in ermine, diamonds, or Daimlers) "an arrangement could be come to" (to quote Mrs. Nickleby) whereby the fee could be paid in instalments to cover a stated period, and if this were a recognized and usual arrangement, the blessing to the £500 a year man would be untold. For he too must live, and he naturally, and for the sake of a struggling family, desires to be treated by what he, rightly or wrongly, believes to be the best skill attainable. But he does not like to plead poverty and beg for delay. He suffers. I might amplify this theme, but space is limited. The surgical fee must be paid too quickly. That of the general practitioner is paid too slowly. To many families that dragging half-yearly or yearly bill, slowly lengthening pill-box by pillbox, visit (of frequently unknown cost) by visit, is a really dreadful incubus which casts a shadow on the Christmas festivities and darkens the merry midsummer.

"If only the doctor would send in his account monthly and have done with it, then there would be some hope of checking the thing and paying it off," is the *cri du cœur* of many a hard-pressed householder.

"I have set aside £25 for the doctor's bill," I heard a jaded-looking man say not long ago. "But it may be over £30, and it may be only £22—Lord knows which. You can't account for all the visits." There were still four months to live through before that anxious point could be settled with its unnecessary suspense. The thrifty public would certainly prefer bills more frequent, and, above all, more detailed. Honestly, would not the profession prefer them also? And if not, why not?

On the subject of advertisement the laity has its own strongly-marked view. Doubtless there are some good reasons for the rule which forbids it, and a meticulous particularity in the size of a brass plate or the iniquity of a professional notice in a chemist's shop may have their point. But we do not feel there is that consistency in the matter which commands respect.

It may be a very derogatory action in a struggling general practitioner to post his address at the chemist's, though it would often be a great convenience to the public. But if it be so, is it more worthy that the medical attendants on some distinguished invalid should be "billed" on the newspaper placards, their opinions cited, and their name and fame trumpeted through the megaphone of the press until every Hoggenheimer in Mayfair feels that these only are the guides to whom can be entrusted disease so precious as his own? One has heard that these eminent persons sometimes deplore publicity, and, with Mr. Crummles, marvel how such things (and many other notices) get into the papers. Still they do, and must be a valuable asset. Yet another point. There appears to be an idea that any physician or surgeon who writes a book for the instruction of the public, and writes it in English and not in the language courteously accepted for professional purposes as a substitute, is walking very near the edge of the precipice of advertisement, and may, and often does, incontinently tumble over, and thereby incurs the censure and contempt of the medical authorities. We think this very injurious to ourselves. That the author thus distinguishes himself amongst his *confrères* appears to us a matter of no importance. He has every right to it if he can do so, and the others may (if they can) indemnify themselves by being equally successful. But what concerns *us* is that we should have the opportunity of being so instructed. It is we who are implicated, and to treat us as children who may not hear unpleasant details, and cannot understand their bearings, is to insult our understanding, and to attempt to continue a conspiracy of silence which education is rendering more absurd and impossible every day. Far from joining in the condemnation of those who attempt to enlighten us, we fail to understand why it should not be a test of what is best and greatest in the profession to be a successful teacher of the laity in matters which concern them. This is one of the functions of the true physician, and one which the future will demand, and to stigmatize it as self-advertisement, while permitting indirect but more lucrative forms of advertisement, savours of injustice, which finds no response from us.

It is said that the laity are not qualified to comprehend such matters, and that it is in their interest that the prohibition exists. We cannot agree with this view of the case, since, with such knowledge as we possess, we must be the final judges when any definite surgical or medical treatment has to be decided for ourselves and our friends. I give a typical case: A patient sought advice from four successive specialists on a malady in which much of the happiness of her future life was involved. One advised no treatment at all and resignation to the inevitable; the second a costly and wearisome experiment, which might or might not succeed; the third suggested local and palliative measures; the fourth recommended change of air and scene. Finally, the patient and her sorely-puzzled friends pooled the advice and evolved a kind of hybrid treatment, which met with an astonishing and gratifying success.

But it was they—as it always is—who in the last resort had to judge the professional opinions, and I contend that, as no one can shift this responsibility and many others, people in this position need every sort of education possible, and that the man who has written a book which helps to create an intelligent and reasonable public, deserves well of that public and of his profession.

There is something to be said for the absolute freedom of action permitted to every medical man in America. The drawbacks are obvious, but I am by no means certain that the advantages, from the lay point of view, do not outweigh them. The ideal is, of course, State payment of the profession, and this is bound to come, so excellent has been the work done by the medical officer of health, and so clearly are indicated the opportunities for that thoroughly organized and systematic campaign against disease, so absolutely impossible under obtaining conditions.

But meanwhile, in the present state of cut-throat competition, the orthodox medical man is heavily handicapped, and this handicap reacts on the patient, who is courted far more than is good for him, and has not even the poor opportunity of judging between rival claims which is given by open advertisement.

A whole article might be devoted to an uneasy sense in the public mind that the last twenty years has seen a sensible *commercializing* of the medical world, and an increase of professional jealousy which not infrequently stifles talent, and thus reacts injuriously upon our interests.

We are dissatisfied, also, with the continuity of medical education, believing that the average medical man is unable or unwilling to keep step with the progress of modern science which affects his work more rapidly and profoundly than it perhaps does any other.

Compulsory post-graduate courses might do something to improve matters, but it is difficult to see how these could be adapted to the needs of the struggling general practitioner, whose battle with difficulties is already hard enough. Here, again, the organization of a State Medical Service would come to the aid of the public.

But I must close these discursive remarks, though there is much more I should like to say on things as they are and things as they might be. I have left much unsaid of the opinions and distrusts tending to loosen the bonds between the public and those who under many difficulties, personal as well as general, perform their duties towards us with such varying measures of success.

My belief is that those bonds may and must be strengthened if it be recognized that the future will differ from the past most materially in the fact that we shall not so much call on the physician to rescue us from the disastrous consequences of our own and others' ignorances and follies when the harm is done, as to instruct and safeguard us in the ways of health and right living. The possibilities here are infinite.

RESEARCH DEFENCE SOCIETY.

BRIGHTON.

A BRANCH of the Research Defence Society was formally constituted at a public meeting held at Brighton on December 13th. Lord CROMER was in the chair, and among those present were Sir Arthur Conan Doyle, President of the new Branch, and Mrs. Scott Malden (Vice-President), the Rev. Felix Asher, the Rev. F. H. Brewin, Major-General and Mrs. Erskine, the Rev. F. W. J. Merlin, Alderman Slingsby Roberts, J.P., the Rev. A. P. Spelman, Mr. T. Macdonald Eggar (Honorary Secretary), and several members of the medical profession. Lord Cromer alluded to the very great loss the nation in general, and more especially those interested in medical research, had suffered in the death of Lord Selby, President of the Commission appointed a few years ago to inquire into the question of vivisection. Lord Selby had, however, found a very able successor in Mr. Abel Ram, who was a member of the Commission. He had communicated with that gentleman on the subject of the delay in the issue of the report of the Commission, and had been assured that the utmost would be done to push matters forward and to get the report issued early in the forthcoming year. After expressing his pleasure at the formation of the branch, Lord Cromer went on to say that humanity was on the side of those who devoted their time, their money, their unselfish labours, and sometimes their health to preserving and prolonging human life.

Medical science had undergone a revolution during the last forty years. He did not wish to weary them with statistics, but any one who wished to go into the subject could satisfy himself beyond doubt as to the splendid results achieved by bacteriological research. The most eminent men in the medical profession were practically agreed upon the fact that these results could not have been brought about but for experiments on animals, and Darwin had himself said: "He could not think of any one step which had been made in physiology without that aid." If they would take the trouble to go into facts they would find that pain was very rarely inflicted, and they contended that when it was inflicted, it was amply justified by the results which had been obtained in preserving human life and in diminishing human sufferings. (Applause.) What antivivisectionists and the public in general had a right to expect was that the operations on animals should be under such control as to prevent the infliction of unnecessary suffering. That safeguard, he believed, at present existed, but if any further measures were required, he did not doubt that the Commission would be able to indicate the direction which reform should take.

Moving a resolution that the formation of the Brighton and Sussex Branch be confirmed, Dr. R. RYLE said no experiments whatever were made without a very definite purpose in view.

Seconding the resolution, the Rev. F. W. J. MERLIN said that when he was in a laboratory he took no anaesthetic for his Nonconformist conscience, but he never saw a single cruel action. He supported the society because he believed it was man's mission to minimize pain.

In moving a resolution that the election of the committee be confirmed, Sir ARTHUR CONAN DOYLE said that putting all human needs aside, an overpowering case could be made for experiments on animals from the point of view of the animal world alone. Millions of animals were saved from a painful death every year from anthrax, rabies, rinderpest, and other diseases by methods directly due to such experiments. The opponents of vivisection decried it in the supposed interests of animals, but it was the animal world that would suffer most severely if their ill-advised measures were adopted; and it was the animal world that had suffered most from the discouragement of research that had sprung from the agitation. Their opponents said that it was not the death of the animals but the pain inflicted to which they objected, and that 88,000 experiments took place last year. On looking into it, however, they would find that 85,000 of these were inoculations or injections involving no pain whatever. There might or might not have been subsequent disease—in most cases not—but it was a disease in every case induced for the purpose of treating and curing the same disease in others. The balance of advantage and of humanity was always in the direction that a few should have disease in order that very many might be saved. As to the odd 3,000, a single large cattle ship crossing the Atlantic, a single freight of poor old horses crossing to their doom at Antwerp would represent far more suffering than ever they endured. It was the very rarest thing for an experiment to be performed without anaesthetics, and the animal was painlessly killed before it emerged from it. He was sure that every scientific man would agree with him that if the average human life ended as easily and painlessly as the death of an animal in the laboratory, they might be easier in their minds. What was the return from this small sacrifice of animal life? It was the practically unanimous decision of the medical and scientific faculty in every country that along that track lay the line of advance. The progress that had taken the terror from diphtheria, taught them to abolish malaria on the Gold Coast and yellow fever in Panama, and changed the face of the whole globe, had all come from animal inoculations.

Dr. WILLOUGHBY FURNER seconded the resolution.

Questions were put to Lord CROMER and Mr. STEPHEN PAGET by Mr. STEPHEN COLERIDGE about his bill. Both replied that they had not read it, but would do so carefully if it ever came before Parliament. After some other questions, the meeting closed with a vote of thanks to the speakers, moved by the Rev. FELIX ASHER and seconded by Dr. HOBHOUSE.

LIVERPOOL.

A meeting was held on the same day at Liverpool to form a branch of the Research Defence Society. Lieutenant-Colonel JOHN PILKINGTON, F.S.A., who presided, proposed the resolution, which was seconded by Dr. RICHARD CATON, supported by Professor SHERRINGTON, and carried unanimously.

The following were elected the first members of the committee: Lieutenant-Colonel John Pilkington, F.S.A., Professor Sir Rubert Boyce, F.R.S., Professor C. S. Sherrington, F.R.S., Dr. Richard Caton, J.P., Mrs. Gordon Gullan, Francis C. Danson, J.P., T. E. Sampson, J.P., A. G. Jeans, A. Lyle Rathbone, J.P., C.C., P. Charles Kelly, C.C., Colonel W. H. Bretherton, V.D., Major David C. Pugh, V.D., Captain W. E. Moss, F. W. Meacock, Richard Yates, A. Adams, Frederick C. Lewis, Walter Hulme, Frederick Miners, and Mrs. Charles Farrar. The following were elected officers for the year: President, Lieutenant-Colonel John Pilkington; Honorary Treasurer, Captain E. W. Moss (Davies, Benachi, and Co.); Honorary Secretary, Mr. Frederick C. Lewis; and Honorary Auditor, Colonel W. H. Bretherton, V.D.

ADAMS v. POMEROY.

AN APPEAL.

WE have received the following letter for publication:

Sir,—The case of Adams *v. Vanity Fair* and others is of considerable interest to the medical profession. The action was originally brought against *Vanity Fair*, Limited, the editor of *Vanity Fair*, the printers, the publishers, and the writer of the article, Mr. Ernest Pomeroy. The first four made and published a full apology to Dr. Adams, which she accepted on condition that they paid costs up to the date of their apology, so that, at an early stage of the hearing, proceedings were stayed against all except the last-named defendant, Mr. Ernest Pomeroy.

The article which formed the basis of the Adams libel action was published in *Vanity Fair* on October 7th, 1908, and it is typical of the attacks previously made by Mr. Pomeroy against the medical profession, particularly in connexion with the subject of vaccination.

It contained scandalous and absolutely untrue statements regarding the whole medical profession, and suggested an imputation against Dr. Adams personally which, if true, would necessitate her exclusion from the profession on the ground of infamous conduct. She strongly resented the general as well as the personal attack, and, in our opinion, she rendered a public service by her action in bringing the defendant into court at her own risk and exposing his methods. We believe that this view will be generally endorsed and that many members of the profession will be glad to show their appreciation of the

trouble and anxiety incurred by Dr. Adams, largely from altruistic motives, by contributing to a fund for the reimbursement of her out-of-pocket expenses.

After the judge's summing up, which contained a scathing criticism and condemnation of the writer of the article, and in which he emphasized the point that the individual opinions of the jury on the merits or demerits of vaccination ought not to affect their verdict, the finding of only ¼d. damages came as a surprise to those in court. The taxed costs will not cover all the legal expenses which Dr. Adams has incurred, so that there will be a deficit of at least £100.

Contributions are invited, and may be sent to the honorary secretary of the Adams Fund, Dr. L. Garrett Anderson, 114A, Harley Street, London.

We remain, etc.,

William Whitla.
Henry T. Butlin.
Edmund Owen.
Thomas Barlow.
Victor Horsley.
Mary Scharlieb.
James Berry.
Florence Nightingale Boyd.
May Thorne.
Jane H. Walker.
F. May Dickinson Berry.

The following subscriptions have already been received:

	£	s.	d.
Mrs. Garrett Anderson, M.D.... ...	5	0	0
Mrs. Dickinson Berry, M.D.	1	1	0
Dr. Albert Cope	0	10	6
Sir Victor Horsley	5	0	0
Sir Thomas Barlow	5	0	0
Mr. Henry T. Butlin	2	2	0
Dr. Jane H. Walker	2	2	0
Dr. May Thorne	5	0	0
Mrs. Scharlieb, M.S.	5	0	0
Mrs. Stanley Boyd, M.D.	2	2	0
Mr. Edmund Owen	2	2	0
Sir William Church	1	1	0
Sir William Whitla	1	1	0

MEDICAL RESEARCH.

Beit Memorial Fellowships for Medical Research.

Mr. Otto Beit has placed in the hands of trustees the sum of £215,000 to found and endow as a memorial to his brother, Mr. Alfred Beit, a series of Beit memorial scholarships for medical research, to promote the advancement by research of medicine and the allied sciences in their relations to medicine.

The circumstances under which Mr. Beit has been led to make this munificent gift to science are explained in the following letter, which was read to the Senate of the University of London at their meeting on December 15th:

"49, Belgrave Square, S.W.,
"London, December 10th, 1909.

"My Lords and Gentlemen,

"It will be within your recollection that my brother, the late Mr. Alfred Beit, in his lifetime and by his will provided a sum of together £50,000 for the purpose of creating and assisting the fund of the then proposed 'Institute of Medical Sciences.'

"The formation of this Institute, owing to a series of circumstances, having become impossible, the Treasurers of the Fund were directed by an order of the High Court to return all moneys received for this purpose to the donors, and in consequence such part of the above sum as had already been paid was returned to my late brother's executors and by them paid over to me as his residuary legatee.

"It has always been my earnest wish that these moneys in some way should again be devoted to a public purpose as nearly as possible identical with that which had been originally contemplated by my brother.

"After considerable deliberation with those who had advised him, a plan has been devised the details of which are embodied in the accompanying Deed of Foundation.

"To give this Fund such extent as to make it, as I sincerely hope, thoroughly useful, I have decided to increase the above-mentioned sum to £215,000, so as to yield by investment in trustees' stocks an annual income of about £7,500.

"I desire to name this Fund 'The Beit Memorial Fellowships for Medical Research.'

"From this title, and on a perusal of the Deed, you will see that the Fund is to be devoted entirely to the furthering of medical research work in all its branches.

"A sum of £250 a year for three years is to be granted with this object to any man or woman of European descent, graduate of any approved university within the British Empire, who is elected to a Fellowship.

"The Fund is to be administered by a Board of Trustees, who in their turn will be assisted by an Advisory Board of medical men. The names of those who have most kindly consented to act appear in the Deed, and I take this opportunity of expressing to both the trustees and the members of the Advisory Board my sincere gratitude to them for undertaking the duties imposed upon them.

"It is my most anxious wish to make this Fund a lasting memorial to my late brother, and I address myself, therefore, to your body, knowing as you do the deep interest Mr. Alfred Beit at all times took in the advancement of medicine and medical research.

"In view of the fact that such research is to be conducted almost entirely in institutions allied to the University, I venture to ask you to allow me to have the benefit of the advice of your Principal for the time being as one of the Trustees.

"I feel convinced that the Trustees as well as the Advisory Board will at all times give every consideration to any recommendation your body may be good enough to put before them.

"I have the honour to be,
"My Lords and Gentlemen,
"Your most obedient Servant,
"Otto Beit.

"To the Senate of the
"University of London."

The affairs of the Trust will be administered by a board of trustees, consisting of the Right Hon. Viscount Milner, G.C.B., G.C.M.G.; the Right Hon. Lord Curzon of Kedleston, G.C.S.I., G.C.I.E.; the Right Hon. R. B. Haldane, K.C., M.P.; the Principal of the University of London (*ex officio*), Mr. H. A. Miers, D.Sc., F.R.S.; Mr. Otto Beit; Dr. J. Kingston Fowler; and Mr. Bourchier F. Hawksley. The trustees will be assisted by an advisory board, consisting of Sir T. Clifford Allbutt, K.C.B., F.R.S., Regius Professor of Physic, University of Cambridge; Dr. J. Rose Bradford, F.R.S., Professor of Medicine, University College Hospital Medical School; Dr. J. Kingston Fowler, Senior Physician to the Middlesex Hospital; Dr. C. J. Martin, F.R.S., Director of the Lister Institute of Preventive Medicine; Dr. William Osler, F.R.S., Regius Professor of Medicine, University of Oxford; and Dr. E. H. Starling, F.R.S., Professor of Physiology, University College, London. Ten fellowships, or a larger or smaller number as the trustees may determine, will be awarded annually; they will be of the annual value of £250, and will be tenable for three years, power being reserved to the trustees in exceptional cases to grant an extension for a further period of one year. Fellows will be required to devote the whole of their time to the authorized research, and will not be allowed, without the consent of the trustees, to take or hold any appointment, whether paid or unpaid.

Persons eligible for fellowship are as follows:

(I) The Fellowships are open to any person of European descent by both parents, without restriction as to nationality, who at the date of election has taken a degree in any faculty in any university in the British Empire approved by the trustees, or who, if a female, has passed an examination which would have entitled her, if a male, to take any such degree. (II) In exceptional cases the trustees may, on the recommendation of the Advisory Board, accept the possession by a Fellow at the date of election of a medical diploma registrable in the United Kingdom as a qualification for a Fellowship in lieu of a degree. (III) There are no restrictions as to age, and no person is disqualified on account of his or her religious or medical opinions.

Applications for fellowships must be addressed to the Honorary Secretary, Beit Memorial Fellowships for Medical Research, 35, Clarges Street, Piccadilly, London, W., and must be made on a form which can be obtained on application to the address indicated.

The first election of Fellows will be made on or about March 1st, 1910, and applications must be received on or

before January 17th, 1910. A Fellow will be required at least one month before the date fixed for subsequent annual elections to furnish a detailed written statement of his work during the preceding year for the consideration of the Advisory Board, which will report thereon to the trustees.

A Fellow must carry on his research in the place at which he has been authorized to carry it on, and a list of recognized places of research has been drawn up as follows:

A. *University and University Colleges and Institutes.*

1. The Physiological laboratory of the University of London, South Kensington.
2. The Institute of Physiology, University College, London, University of London.
3. The Laboratories of the Department of Chemistry, Biology, Physics, Anatomy, Pharmacology and Hygiene, University College, London, University of London.
4. The laboratories of the Departments of Chemistry, Biology, Physics, Anatomy, Physiology, Pharmacology and Hygiene, King's College, London, University of London.
5. The Brown Institution, University of London.

B. *Imperial and National Services.*

1. The laboratories of the Royal Naval Medical Service, Haslar Hospital.
2. The laboratories of the Royal Army Medical College, Millbank, S.W.
3. The Lister Institute of Preventive Medicine.
4. The laboratories of the Imperial Cancer Research Fund.
5. The Cancer Research Laboratories of the Middlesex Hospital.
6. The laboratories of the Royal Commission on Tuberculosis.
7. The laboratory of the London County Asylum, Claybury, Woodford Bridge, Essex.
8. The London School of Tropical Medicine, Victoria and Albert Docks, E.
9. The Liverpool School of Tropical Medicine.
10. The laboratories of the Royal Institute of Public Health, 37, Russell Square, London, W.C.
11. The laboratory of the King Edward VII Sanatorium, Midhurst, Sussex.

C. *Medical Schools and Colleges and the Hospitals connected with them in all the Departments of their Work.*

Such hospitals and medical schools as are schools of the University of London.

D. *Such other Hospitals, Colleges, Medical Schools, including Schools of Tropical Medicine, Laboratories, or other places as may be approved by the Trustees after receiving a Report from the Advisory Board.*

Power is, however, reserved to the Trustees to vary the place in which a Fellow should carry on his research.

The temporary office of the Trust is at Seymour House, 17, Waterloo Place, Pall Mall, S.W.

LITERARY NOTES.

IN the first paragraph of "Literary Notes" which appeared in the BRITISH MEDICAL JOURNAL of December 11th, page 1692, the name of the author of the *Modern Greek-English Dictionary* there referred to was accidentally misprinted as "Kyriades." It should have been "A. Kyriakides." The book, which is now in its second edition, contains a Cypriote vocabulary. The English publishers are Messrs. Williams and Norgate.

In a paper on books and reading, read before the Kinlochleven Literary Society, and now reprinted from the *Caledonian Medical Journal*, Dr. Lachlan Grant, of Ballachulish, discourses on the value of the reading habit, which he says can be acquired by all, especially in these days of public libraries. But Dr. Grant urges that the private collection should not be neglected, and we are sure all writers of books (which was the description given of himself by Thomas Carlyle) will highly approve his recommendation that all who can afford the luxury should buy as many of their favourites as they can. He utters a needed note of warning against too much reading of newspapers, which, as he truly says, becomes a form of mental dissipation. He himself is catholic in his literary tastes. He does not frown at novels, which, it may be remembered, were an unfailing relaxation to Darwin. One of the greatest physicians of the present day used to read novels on his daily rounds, tearing out and flinging out of window the pages as perused; a better use of them would have been to give them to hospitals, the inmates of which are often even now but ill supplied with light reading. Napoleon, who carried about with him on his campaigns a library of three thousand volumes, also read in his travelling carriage. In the matter of novels he was somewhat difficult to please, and he threw away those which did not hold his interest from the first. Thus, as Andrew Lang says, he marked his steps of conquest through Europe with bad novels. The only rule as to reading is to read what interests one and gives pleasure. At the present say the snippet magazine and the novelette have almost killed the taste for anything deserving the name of literature; while the lady novelist, with her eternal sex problem, has to a large extent taken the place of Scott, Dickens, and Thackeray, who are treated as "back numbers." Has not the half-baked intellectual condition which we call "education" much to answer for? We would add that if the mind is to be instructed, books must be digested, not merely skimmed through; the spirit of the old maxim *Non multa sed multum*, which is reversed by our present system of education, still holds true.

Dr. W. H. Maidlow, of Ilminster, has been preaching from the same text as Dr. Lachlan Grant to the local literary society. We are glad to note that he makes special mention of the great men who have combined literature with medicine—Sir Thomas Browne, Oliver Goldsmith, Mark Akenside, Tobias Smollett, John Arbuthnot, George Crabbe, John Locke, John Keats, John Brown, Oliver Wendell Holmes, Charles Lever, Arthur Conan Doyle. But why does he omit the greatest of them all, François Rabelais, Doctor of Medicine of the University of Montpellier? Molière, the greatest satirist of medicine, might almost be included *in nostro docto corpore*, for he was evidently carefully posted in the medical learning of his day by some member of the Faculty. Dr. Maidlow discusses what literature is, concluding that "literature in its widest sense is the record of the impressions made by external realities of every kind upon intelligent men and the reflection which these men have made upon them." This virtually means what Matthew Arnold expressed more tersely when he defined literature as a criticism of human life. Like Dr. Lachlan Grant, he thinks that the lavish manner in which literature of all kinds has nowadays been placed within reach of the humblest reader may lead to mental dissipation. Dr. Maidlow urges strongly upon readers the reading of authors whose works have become classics. As he well says: "The sign of a classic is its persistence. It has undergone the test of time, and survives in spite of its antiquities, different waves of taste, and social conditions." After all, a true classic is always modern; there is a dialogue in Theocritus between two women preparing to go to the play which might have been written to-day. Dr. Maidlow indicates his own favourites in a little catalogue of his bedside books which he gives. It consists of *Don Quixote*, Montaigne's and Bacon's *Essays*, the *Religio Medici*, the *Bible*, Plutarch's *Lives*, More's *Utopia*, the *Meditations* of Marcus Aurelius, and Bunyan's *Pilgrim's Progress*. All these can be bought for a trifle, and they make up, with the addition of Shakespeare, a "perpetual feast of nectared sweets, where no crude surfeit reigns." Dr. Maidlow treats of literature for the sick. He excludes all works of a depressing character. Personally, on an occasion when he was laid up, he learnt Edward Fitzgerald's *Rubaiyat of Omar Khayyam*, some of the *Idylls of the King*, and most of the *Ancient Mariner*. For persons of less heroic digestion we should recommend something lighter. It is just in the sick room that the scraps and snippets, provided so copiously by literary caterers of the present day, find a suitable place.

The new instalment (second series, vol. xiv, Q Rzehak) of the *Index-Catalogue of the Library of the Surgeon-General's Office, United States Army*, which has just come to hand, includes 10,019 author titles, representing 5,231 volumes and 8,158 pamphlets. It also contains 4,065 subject titles of separate books and pamphlets, and 31,370 titles of articles and periodicals. The Library now contains 168,879 bound volumes and 297,560 pamphlets. The preface from which we take these figures is signed by the Librarian, Lieutenant-Colonel Walter D. McCaw, Medical Corps. Of the value to medical literature of this unique publication it, at this time of day, would be superfluous, and, indeed, impertinent, to speak. It is sufficient to congratulate all concerned in its production on the results of their labours.

Nova et Vetera.

THE BOOK-OATH.

OWING to the fact that the Oaths Act, 1909, has received the Royal Assent, and will come into force on January 1st, 1910, it may be assumed that the practice in England of "kissing the book" while taking an oath will soon become obsolete. Any references, therefore, in the past to oaths being taken on books, either by kissing or touching them with the hands, are not without interest.

Among the Fathers of the Christian Church swearing upon solemn occasions was held to be lawful. The early Christians were accustomed to lay their hands on the Gospels in swearing, and to say in conclusion, "So help me God and the contents of this Book." There is said to be extant (Cod. 3, 1, 14) an ordinance of the Emperor Julian prescribing that the oath be taken *sacrosanctis Evangeliis tactis*. Possibly the custom may have been derived from the Jewish oath that was taken anciently with the scroll of the Law held in the hand.

With Mohammedans it is customary, in a court of law, to take the oath on a book. The Egyptian, when swearing, places his hand on a copy of the Koran held out to him, and says, "By God the Great!" three times, and then adds, "By what is contained in this of the word of God" (Lane, *Modern Egyptians*, 1890, p. 102). The Arabian oath is taken by placing the left hand under the Koran, and the right over it (Kitto, *Pictorial Bible*, 1836, vol. i, p. 63, footnote).

Allusions occur now and again to the use of the book-oath at an early date in England. Thus in the records of an English Guild, 1389, we read: "Eche of hem had sworen on ye bok to perfomeme ye pointz"; and, again, in Hall's *Chronicle*, 1548: "Eche of theim takyng a corporal othe upon the holy Evangelistes." By a *corporal* oath was meant one taken by bodily touching a sacred object, as the Gospels, the consecrated Host, or the relics of saints, and was so called to distinguish it from oaths that were merely spoken or written. Shakespeare has several allusions to the book-oath in his plays. "I'll be sworn on a book she loves you," Mrs. Quickly says to Fenton, who is courting sweet Anne Page. "You kiss by the book," Juliet exclaims to Romeo; and Stephano to Caliban, "Come, swear to that; kiss the book."

When the practice of "kissing the book" first began is not quite clear. The kiss of veneration is certainly of ancient origin, and has been bestowed on many objects deemed sacred. In the Roman and Greek Churches especially, the Crucifix, the altar, the pictures and statues, and relics of saints have been kissed by devotees. Kissing the crucifix has in not a few Christian countries been regarded as a particularly holy act, and sometimes required in taking an oath as the highest asseveration that the witness is speaking the truth. It is not surprising, therefore, that the kiss reverential should have been extended to the Gospels, and made obligatory in the administration of judicial oaths. Apparently the laying of the hand on the Gospels is a more ancient form of swearing than "kissing the book," and was the practice that obtained in our courts until the sixteenth century, when it appears that a constable took the oath as follows: "I shall true constable be . . . so helpe me God and my holydome, and kysse the boke" (Fitzherbert, *The Boke of Surveyinge and Improvements* 1523).

After the Reformation, and when the Bible had been translated, and printed copies of it circulated widely, an oath taken upon it was very binding upon the conscience. Congreve makes a character in one of his plays say, "Madam Marwood took a book and swore us upon it, but it was but a book of poems. So long as it was not a Bible-oath we may break it with a safe conscience" (*The Way of the World*, 1698, v, 2). "On my Bible-oath" has often been said when a speaker wished it to be understood that he was strictly declaring what is true.

Athough "kissing the book" became a well-established practice, irregularities occurred from time to time on the part of oath-takers. Of this we have evidence in a satire on the University of Oxford, by Nicholas Amhurst, a poet and political writer. "He takes the oaths of allegiance and supremacy . . . some have thought themselves sufficiently absolved from them by kissing their thumbs instead of the book" (*Terrae Filius*, 1721). Recently some witnesses in courts of law have been alleged to adopt the same subterfuge to avoid the risk of catching any contagious disorder.

The public may well have been led to suspect that "kissing the book" is an insanitary practice after having read such notices in the press as the following: "Much-kissed Testament. Mr. J. A. Charsley, of Beaconsfield, Bucks, one of the oldest coroners in England, is resigning the appointment. . . . Mr. Charsley has in his possession a Testament which has been used at inquests in the division of Bucks for over 100 years." Many witnesses in English courts have preferred of late to take the "sanitary" oath, as it has been called, and to swear with the right hand raised as is the custom in Scotland. This sanitary oath is often termed the Scottish oath, but Judge Willis is reported to have said not long ago at the Greenwich County Court, when a plaintiff, before giving evidence, took the oath in Scottish fashion: "I do not object to your being sworn; you were sworn holding up your hand. It is quite English, and no more Scottish than English. It has been used in this country for 300 years, and yet the Legislature is passing an Act to make that legal which is already legal." However that may be, the custom of swearing with the uplifted hand is certainly a very old one, and its origin has been traced back to patriarchal times, when Abram said to the King of Sodom, "I have lift up mine hand unto the Lord, the most high God, the possessor of heaven and earth" (Gen. xiv, 22). Adjurations with the uplifted hand are mentioned in other parts of Scripture (Deut. xxxii, 40; Dan. xii, 7; Rev. x, 5). In Homer's *Iliad*, Agamemnon's oath is described as being taken, "with hands uplifted to th' attesting skies" (Pope's translation, xix, 254). Swearing, therefore, with the hand raised is a practice of much greater antiquity than that of touching a book with the hand or lips.

At one time it seemed as if the book-oath would be entirely abolished, for, as the Oaths Bill left the House of Commons, the witness was merely required to take the oath with uplifted hand; but, as amended by the House of Lords, the bill provides that "the person taking the oath shall hold the New Testament in his uplifted hand." Consequently, the place which the Bible has occupied for so long a time in the ceremony of oath-taking will still be preserved.

SIR ALFRED KEOGH, K.C.B., Director-General, and the officers of the Royal Army Medical Corps, London, gave a conversazione at the Royal Army Medical College on December 14th. It was largely attended, among those present being many members of the civil profession and ladies, as well as officers of the corps both on the active and the retired list. A number of interesting scientific demonstrations were given and many specimens shown, including a series illustrating the life-history of *Ornithodorus moubata*, the transmitter of the tick fever of Africa, exhibited by Lieutenant-Colonel Sir W. B. Leishman.

THE Leicester and Leicestershire Branch of the National Association for the Prevention of Consumption has just issued its tenth annual report, which shows that the branch continues to carry out useful work. During the year lectures on the prevention of consumption have been given, attention has been drawn to the value of open-air schools for delicate children, and a letter has been issued to 300 manufacturers in Leicester, with the hope especially of improving the ventilation of factories and workshops. The report draws attention to the fact that both in the town and county of Leicester the deaths from tuberculous diseases are not diminishing. Arrangements have been made for the Tuberculosis Exhibition, which is now being shown in various parts of London, to visit Leicester early in the coming year. The branch has during the past, as in the previous year, maintained a number of consumptive patients at the Mount Vernon Hospital at Northwood, and a list of 51 patients treated at that institution is published in the report. During 1909, 34 applicants for admission were examined, of whom only 13 were found suitable and were admitted to Northwood. The average stay of each patient was about three months, and the satisfactory results of treatment recorded in this report are largely due to the care with which the applicants are examined by the committee, thus ensuring that unsuitable cases are rejected.

British Medical Journal.

SATURDAY, DECEMBER 18TH, 1909.

THE MEDICAL ASPECTS OF THE PARLIAMENTARY SESSION.

THE fourth and last session of the Parliament of 1906 will always be remembered rather for the great questions which it raised and did not settle than for the Acts which it placed on the Statute Book. As was anticipated in the King's Speech on February 16th, less time than usual has been available for legislative measures, owing to the lengthy period required for the consideration of the means of raising the revenue necessary for the services of the State. The Finance Bill alone engaged the attention of the Commons for seventy-three sittings, and spread itself over six of the eleven months during which Parliament sat. Under these circumstances the legislative output is necessarily less abundant than usual. The Government have passed forty-one Acts, and nine Acts introduced by private members have become law. When Parliament rose on December 3rd the Speech from the Throne referred with satisfaction to some of the measures passed, such as the Housing Act, the Trades Board Act, the Irish Land Act, the Labour Exchanges Act, and the Development Act, all measures which affect the social progress of the people. In this respect the Parliament which has met for the last time has up to the end been busy over measures conducive to the general welfare of the working classes.

None of the Acts mentioned above deserves so much attention from the medical profession as the Housing and Town Planning Act. It was specially commended in the King's Speech, twice over, for its sanitary provisions, and we welcome it as a great legislative enactment for promoting public health. It stands out as one of the most important results of the most arduous session on record, and is an example of how good results can be won by patient pressure and tactful treatment. The four sessions of this Parliament have all given some share of time to the forming of this measure. In 1906 it was read a second time in the form in which Sir Walter Foster introduced it in the last Parliament, and was referred to a Select Committee. The report of the Select Committee, an excellent study of the subject, was considered by the Local Government Board, and in 1907 Mr. Burns introduced the greatly extended bill, which ran its course through Grand Committee in 1908, and has this year become law. The many crises in the fortunes of the measure have been narrated in our columns from time to time, for even in this session its success has more than once been in doubt. The President of the Local Government Board guided its course with a tactful skill and a wise courtesy which finally delivered it from the dangers that at one time threatened its existence in the Upper Chamber. The Act will do much to advance the social well-being and the sanitary development of both rural and urban areas, and will secure for the towns of the future the orderly and healthful growth essential to wholesome progress. The medical profession may well rejoice that the principle of security of tenure for county medical officers of health has been won in the Act after a strenuous struggle.

We are glad to notice that in the debates on the Finance Bill the claim of the profession to consideration as regards the proposed motor car tax was freely recognized by the Government; we hope, therefore, that this concession to a hard-worked body of men, not too well paid, will be secured in any future legislation.

It is a matter for congratulation that Sir William Collins has been able to pass the Asylum Officers' Superannuation Act. We ventured to hope when the bill had emerged from the Select Committee, that it would be assisted by the Government in its later stages. This hope was realized in the last days of the struggle, and a class of highly deserving officials, entrusted with the most delicate and responsible duties, will now be placed in an assured position in view of age or disablement.

The Metropolitan Ambulances Act is another measure which will prove useful and helpful in the case of all street accidents; while the Oaths Act, which alters the old and dirty custom of kissing the book, and substitutes the more cleanly and sanitary method of holding the New Testament in the uplifted hand, will receive general approval.

When we look back to the list of bills promised at the commencement of the session we observe with much regret that the Inebriates Bill was not even introduced, although there is real need for a new and improved Act. The Shop Hours Bill was introduced and withdrawn, and the same ill fortune has been the lot of the Milk and Dairies Bill. This is very much to be deplored. There is urgent necessity, in the interests of the health of the whole community, and more especially for the sake of the children, that a good milk bill should be passed. It has been repeatedly promised, and only last March the President of the Local Government Board, in speaking against the milk clauses in a London County Council Bill, induced their withdrawal in favour of the introduction of more general and more drastic powers in the Government bill. Yet that bill has come to nought. A new Parliament, we trust, will not sanction any more of this dangerous delay.

When the next Parliament assembles, faced, as it must be in any case, with social problems of the most far-reaching character, we hope there will be in it a sufficient number of medical men and others devoted to sanitary questions to push forward with vigour proposals for bettering the health of the people. Medical men, by their training and experience, are specially competent to advise and assist on social legislation. On the one hand, they are better informed with expert knowledge; and, on the other, less trammelled by economic and commercial considerations. That they can prove useful, every session of the Parliament of 1906 has shown, and none more emphatically than the session which has just closed.

PRISON DOCTORS AND THE HOME OFFICE.

THE action brought by Mrs. Leigh, a militant suffragist, against the Home Secretary, Captain Percy (Governor of Winson Green Prison, Birmingham), and Dr. Helby (medical officer), claiming damages for assault consisting in forcible feeding while she was serving a sentence in the prison, was tried before the Lord Chief Justice and a Special Jury on December 9th.

The case was fully reported in the principal newspapers, and it is unnecessary, therefore, to repeat the details here. A verdict was given for the defendants, and judgement was accordingly entered for them with costs. On December 13th a case of the same kind, in which the plaintiff was Miss Laura Ainsworth, was, in view of the decision in the previous case, withdrawn. It would be overstepping our province to discuss these cases in their political or legal aspects. Medical evidence was given on both sides as to the advantages and disadvantages of nasal feeding, and our readers will form their own opinion on the matter. There is, however, one point closely concerning the profession which it is important should be placed in its true light. In the JOURNAL of October 9th, p. 1089, we pointed out that the Home Secretary had attempted to place the whole responsibility for the method of treatment adopted in the case of the women who refused food on the shoulders of the medical officer. It was virtually admitted in the House of Commons by Mr. Masterman that the compulsory feeding had been sanctioned by the Home Office. In the case of Mrs. Leigh it was proved beyond reasonable doubt that Dr. Helby had acted on orders sent by the Home Secretary or in his name. It was stated in evidence by the governor of the prison that he had passed on to Dr. Helby the instructions which he had received from the Home Office. He said that the effect of the instructions was that the women were not to be released, and that they were to be forcibly fed if the doctor thought it necessary. Mrs. Leigh herself stated in her evidence that, when she refused to take food, Dr. Helby, referring to a blue paper, said he had orders that she was not to be released even on medical grounds, and that if she still refused food, he had to take measures to compel her to take food. When asked by whose orders this was to be done, Dr. Helby, she said, replied that it was by order of his superior officers.

In the face of these statements it is instructive to read the following passage from an affidavit made by Mr. Gladstone: "I have in my possession or power documents relating to matters in question in this suit. I object to produce them on the ground that they are confidential communications passing between me as Secretary of State to persons under me. . . . It is contrary to my duty as Secretary of State and the interests of His Majesty's service that such documents should be produced." This conclusively proves that the Home Secretary was in communication with the prison officials in regard to the matters in question in the suit. What could such communication be about unless it were the medical treatment of the prisoners? Yet Mr. Gladstone tries to shuffle out of this plain inference when he says in answer to interrogatories: "Save in my capacity as Secretary of State, charged with superintendence of prisons of which my co-defendants are officers, I have had no communication or given no instructions whatever, verbal or in writing, to my co-defendants with reference to plaintiff or any class of prisoners in the said prison. I object to state what communications or instructions I have made or given, or caused to be made or given, to my co-defendants, on the ground that it would be contrary to the interest of the public service that any such communication or instruction should be liable to be disclosed, and I therefore object to disclose the communications or instructions now particularly in question, or the nature or effect of them." This is indeed a remarkable answer from a Cabinet Minister. In the light of the evidence of the doctor, of the governor, and of the prisoner, and of the admission of the Attorney-General, that what was done was done in communication with the Home Office (see *Times* report, December 10th), we can only characterize it as disingenuous. It is only in his capacity as Secretary of State that his communications to his subordinates are of any relevancy in this case. His real objection to state what communications he made or gave, or caused to be made or given, is, it may fairly be conjectured, that it would be contrary not so much to the public as to his own interest.

Looked at from any point of view, the manner in which Mr. Gladstone has dealt with the situation has been deplorably weak. But to attempt to throw the whole responsibility on his subordinates is to the last degree contemptible. To what evasions he has had recourse in order to shift the responsibility from himself is shown by the answer he gave to Mr. Arthur Lynch on a former occasion, when he said he "put forward medical officers because it is a medical question, and, as the honourable member knows, or might have known, any responsibility rests upon the medical officers."

It is necessary that the responsibility of the prison doctor should be clearly defined. It would be absurd if he had to get instructions from the Home Secretary for a particular line of treatment in ordinary cases or even in what may be called ordinary emergencies of medical and surgical practice. A doctor so placed would be like the Hindu station-master who telegraphed to head quarters: "Tiger bounding about platform; wire instructions." But when in a case such as that of the "hunger strikers," where the action of the doctor is likely to cause him, rightly or wrongly, to be held up to public obloquy, it is intolerable that he should have the whole burden of responsibility thrown upon him by his official superior. If, in the words of the Attorney-General, "whatever was done was done in communication with the Home Office," the responsibility for the doctor's action obviously rests with the higher authorities. From first to last in this unpleasant business Mr. Gladstone has cut a figure which would be lamentable were it not ridiculous. He reminds us of *Punch's* famous caricature of Lord John Russell as the naughty little boy who chalked "No Popery" on a wall and then ran away.

SECRET REMEDIES IN SOUTH AFRICA.

A STAMPS AND LICENCES BILL has recently been before the Cape Legislature, and some of its provisions were subjected to a good deal of criticism in committee, chiefly on the ground that they would operate in restraint of the freedom of trade within the colony. The Right Hon. J. X. Merriman, the Premier, who was in charge of the bill, seems to have shown a conciliatory spirit until the House came to the clause dealing with "stamp duty on patent medicines," which proposed that the stamp should be affixed before the article was exposed for sale; it was suggested that it would be sufficient if a stamp were put on when the article was actually sold. Mr. Merriman objected that the proposal would operate in favour of the dishonest trader, who would say that he had forgotten the stamp, or had no stamps ready. Then turning to the general subject he said, "Don't waste your sympathy on these articles, I implore you. I suppose that this is the time that I might shed a little light on these articles, which are sold in thousands and tens of thousands in this country. I have in my hand a book published by the

British Medical Association. Only one paper in England was found bold enough to notice it, and pointed out how the people were being swindled day by day by these articles. There are some pills—I won't tell you whose they are—which are priced at 2s. 9d. per box containing thirty, and the estimated price of the ingredients is $\frac{1}{10}$d. Yet people by shoals buy these articles. Then we have pills advertised as 'worth a guinea'—(laughter)—which are sold for 11d. in England—fifty-six pills in a box—and the cost to them is the half of a farthing. Then there's somebody's 'curative syrup,' costing 2s. 6d. a bottle, the estimated cost of its ingredients being one-third of a penny. There is a 'safe cure'—(laughter)—the cost of the mixture 5¼d.; and so on through the whole of this book. I don't suppose there is such a revelation of the people's credulity as is to be found in this book. The people waste their substance on these things, some of which go up to 5 guineas—and worth not 5d. The people go and give money for them, and damage themselves by it—(hear, hear)—therefore, I say that that tax upon these articles—no matter where put on and how put on—is a just tax. These medicines cause harm to the people, and if they would only take exercise and drink sour milk instead, it would be much better for their health. (Laughter.) These poor people who are suffering from diseases go and take these miserable remedies, pay a high price for them, and build up the fortunes of quacks in other lands; and then make themselves worse, instead of better. It is a cruel thing. You know the Latin lines, 'Populus vult decipi . . .' If the people want to be taken in, they will be taken in." An appeal was made to Mr. Merriman to except Dutch medicines, which, a member stated, were looked upon by families as quite a *huisvriend* (house-friend). Mr. Merriman retorted that they were more properly called *huisvijand* (house-enemy), and stated that they were largely composed of alcohol, each phial containing a fluid ounce of alcohol; they appeared on women's dressing tables, and were given to children. The ingredients cost ½d. or ¼d., but the bottles were retailed at 6d. Nevertheless Mr. Merriman consented to the omission of the clause referring to these medicines. Judging from observations made in the course of the discussion as reported in the *Cape Times*, from which paper our quotations are made, the export of secret remedies from this country to the Cape must be very considerable, and it would seem that the American trader is anxious not to be left out in the cold. This appears from a question asked in the Legislative Council by the Hon. Mr. Claassens as to whether the Cape Government were aware of the treatment of Dr. D. P. Yonkerman for tuberculosis in cattle as well as in human beings; if so, whether Government had taken, or intended to take, any steps to ascertain whether it was true that experiments had been made with it both on cattle and human beings, and that the result had been declared satisfactory by doctors and a committee? The Hon. Mr. Malan, Minister for Agriculture, who replied to the question, read a letter from the Chief Medical Officer of Health for the Colony as follows: "The Derk P. Yonkerman Co., Ltd., is an American company which alleges to quickly cure consumption by means of a proprietary article they call 'Tuberculozyne,' alleged to have been discovered by Dr. Derk P. Yonkerman. This so-called cure was investigated by the British Medical Association, and in a book published by that body called *Secret Remedies*, an analysis is given of 'Tuberculozyne,' which shows that its composition is such as to be absolutely useless for the treatment of consumption, and that the whole cost amounts to 2½d., for which the company charges £2 10s." The Minister added that, so far as the Government was concerned, it was not prepared to take any steps to investigate a nostrum of this kind unless there were a law which enabled Government to take proceedings against persons trading in the most barefaced and rapacious manner on the credulity of afflicted and suffering humanity. There is a refreshing directness about the concluding passage of Mr. Malan's reply, which outlines a policy well deserving the attention of Government and legislators in this country. It is, at any rate, very satisfactory to find that the information brought together in the volume *Secret Remedies*,[1] has proved of service to the Cape Government, and has enabled it to appraise at their proper value the nostrums which are advertised and pushed with apparently as much impudence in Cape Colony as in Great Britain.

ADAMS v. "VANITY FAIR" AND OTHERS.

ELSEWHERE will be found a letter, signed by the President of the Royal College of Surgeons of England, the President and the Chairman of Council of the British Medical Association, and other leading members of the medical profession, in which an appeal is made for funds to reimburse Dr. Martha Adams the legal expenses incurred by her in the action for libel brought against the Hon. Ernest Pomeroy. A full report of the case appeared in our last issue, and it is needless to repeat the details or discuss the evidence, which speaks for itself. *Vanity Fair* had already published two apologies to Dr. Adams; the action was therefore in reality against Mr. Pomeroy. The point at issue was somewhat confused by the foolish prejudice which vaccination excites in minds of a certain type, and we must add by the action of the Education Board, which may have led the jury to believe that Miss Adams had gone beyond the limits of her duty. Even if it be admitted that she stepped beyond the strict letter of the law, that would not have justified the atrocious charge that she had done so for purposes of gain. In the article complained of Mr. Pomeroy asked, with the insolence which seems to be the chief characteristic of his literary style, "How many of the children reported to the vaccination man by Dr. Martha were subsequently infected by her?" As the judge pointed out, the defendant had not taken the trouble to find out whether the plaintiff vaccinated or not. But Mr. Pomeroy offered the alternative of a still more offensive insinuation by adding: "Or, if by some other doctor, what percentage of the fees did she obtain?" As Mr. Justice Grantham said, Could anything more libellous be imagined than that? Miss Adams stated that she had nothing to do with vaccination, and that she only did what she believed to be her duty to the Education Authority of Twickenham in whose employment she was. The judge further pointed out that there was not a tittle of evidence that she did what she had done for the sake of fees or sharing the fees with another doctor. Mr. Pomeroy in cross-examination admitted that he had written that "it is a great mistake to suppose there is any merit in being truthful always," and he certainly seems to act up to the principle thus frankly avowed. What a man who professes to hold that doctors are "disease spreaders" and "corpse makers" may write about a medical practitioner cannot damage him or her in the profession; but, as Huxley said, "the world is neither wise nor just, but it makes up for its folly and injustice by being damnably sentimental." Moreover, it is very ignorant of scientific matters. It is, therefore, easily influenced by the rubbish written by fanatics about vaccination, vivisection, and similar matters, and in

[1] Published by the British Medical Association, 429, Strand, W.C. 1s.; post free, 1s. 3d.

the face of a summing up most strongly in her favour, the jury—which represents the "world" as Huxley described it—awarded Miss Adams the lowest possible damages. She deserves our fullest sympathy for her courage in facing the ordeal of a law court—for the ways of British juries are inscrutable—as she was fighting not her own battle only, but that of her profession. Although the jury had the sense to wish to make the verdict cover costs, Dr. Adams, as a matter of course, has to pay a considerable sum which the taxed costs will not cover. It is not fair that she should be allowed to bear this expense, and we confidently appeal to our readers to show their sense of the cowardly attack of which she has been the object by helping to defray the expenses which she has incurred.

KING EDWARD'S HOSPITAL FUND FOR LONDON.

THE December meeting of King Edward's Hospital Fund for London took place last Monday. It is at that meeting that awards for the year are voted and declarations of policy made, and it will be seen from the remarks of the Prince of Wales (who again took the chair), reported elsewhere in this issue, that his participation in the management of the Fund is quite as active as ever. This is a matter for congratulation, because while the initial success of the Fund was due to the exertions made on its behalf by the King, its continued prosperity is in large measure undoubtedly due to the influence of the Prince of Wales. How great the success of the Fund has been is shown by the fact that even in this comparatively early year of its existence it has already reached the goal of its ambitions—namely, the power to make awards totalling in one year £150,000. In respect of policy no novelty was forthcoming. It is still held that the amalgamation of a variety of small institutions in London devoted to the treatment of diseases of the throat, ear, and nose, is desirable, but the pressure now applied is of a negative quality. Sums are set aside to assist in any amalgamation scheme which may be undertaken, and grants to individual hospitals, which would naturally come into such a scheme, are withheld. Last year we drew attention to the fact that a grant had also been withheld from a prominent hospital which the previous year had received a large sum in the way of legacies. On the other hand, its normal income left it with a large deficit on annual maintenance, and we pointed out that the withholding of grants in such circumstances was a practical reversal of the policy which the Fund had hitherto very wisely pursued—namely, that of encouraging institutions to treat legacies as extraordinary and not ordinary income, and to pass them to capital, not current accounts. It is only by care in this direction that hospitals can ever hope to reach a position of reasonable financial stability, and we are glad to note that so far as our examination of the awards has gone, this mistake has not been repeated. On the other hand, there are two notable absentees in the list of grants. One of these is a hospital which applied for a grant, but for the second year in succession has received none, and the other is an institution which, in view of previous experience, did not apparently think it worth while to make any application at all. The institutions in question are places of the highest importance, against whose financial and general administration no well-founded charge could possibly be brought, and the only ostensible reason for leaving them out is the fact that by careful administration in the past they have managed to accumulate a considerable though quite inadequate income. We are certain that if the withholding of grants to these popular hospitals were brought home to them, the general body of subscribers to the King's Fund would be painfully surprised, and we are still more sure that a continuance of the same policy towards institutions of this character is a practical invitation to other hospitals to engage in schemes calculated to keep them in a condition of comparative poverty. In one other point, too, have the actions of the Fund been calculated to give rise to disquiet. To encourage hospital enterprise in important suburbs may be a sound policy, but it is entirely detrimental to the public interest to insist on such institutions being conducted and staffed on precisely the same lines as those in Inner London. The basis of such action is a conception that the operative and medical skill of the metropolis must necessarily be concentrated in Harley Street and its locality. At this date such an idea is very ill founded. In nearly all the suburbs are to be found many medical men possessed of the highest qualifications, who, given opportunities of a kind enjoyed by their colleagues in the provinces, would do equally good work; and how good that work is every one nowadays knows. In the interest both of the lower and middle classes, the right policy would seem to be to develop in Outer London hospitals of the large cottage type, not imitations of those attached to the great teaching schools.

TINY TOWN.

WE are all inclined to condemn the public exhibition of human monstrosities, even when these monsters are of the diminutive order. Unscientific interest in the morbid must certainly be regarded as an indication of a low taste, comparable with the old time passion for gladiatorial shows and with modern bull-fights. It is probably for such reason that dwarfs were so popular among the Roman, Frankish, Saxon, and Middle-English aristocracy. We read that the decadent Emperor Domitian collected dwarfs, as men now collect stamps, and formed some of them into a band of gladiators. Dwarfs also formed part of the retinue of William the Conqueror, and in the seventh century an Empress of Austria assembled together all the dwarfs in the Germanic empire. In our days we are a little ashamed of showing any interest in these diminutive people in their personal aspects. At the same time it is not easy to say what would become of them were they shut out from the possibility of earning their livelihood in exhibitions. Moreover, they are undoubtedly the happier for the society of their peers, and show by their manner that they fully appreciate the attentions lavished upon them. They are also of very distinct value from a pathological and anthropological point of view. Among those at Olympia we notice some striking examples of achondroplasia. Two of these are of exceptional interest, inasmuch as they are instances of the very rare occurrence of achondroplasia in parent and offspring. According to the statement of the mother there were two other deformed children, both of whom died in infancy. But by far the majority of the dwarfs at Olympia belong to that special kind of infantilism which arises sporadically, without evident cause, and has been termed "ateleiosis." It is characterized by the perpetuation of the physiognomy and bodily proportions of the particular time of life at which it happens to begin. It is also distinguished by the frequent occurrence of heredity, usually familial, and by its pronounced degree. These characters are well illustrated among the dwarfs of Tiny Town, most of whom are evidently little more than stereotyped children, and therefore bear extraordinary resemblance one to another. They have shrill or piping voices, big heads, short, flat faces, with more or less uptilted noses, and short

limbs. Of particular interest among these dwarfs is the wife of the late Tom Thumb, whose highly profitable associations with Barnum are so well known. This quiet little lady is a dignified matron of more than average intelligence. As the mother of a dwarf child (and we have no reason to doubt her word; moreover, there is plenty of evidence in her favour) she has proved the possibility of producing a new species or variety of human beings. In talking to her one cannot but regret, in spite of eugenics, that the little mother lost her child while it was still a baby. Some of those who strut the floor at Tiny Town are in reality charming little personages, as anyone will find when he once gets over his first feeling of repulsion. Two of the dwarfs are obviously cretinoid, but their intelligence, though decidedly slow, seems to be too good for the subjects of lifelong primary cretinism. Perhaps they were ateleiotic in the first place, and afterwards became affected with myxoedema. One dark-skinned mannikin apparently owes his stature to a totally different cause. His head is very small, his nose prominent, and his chin weak. He is no doubt an instance of what the French term "*demi-microcéphalisme*," and does not seem to be in possession of the highest degree of intelligence. The inhabitants of the Addison Road Lilliputia will be found of considerable interest to all those who make a study of post-natal development, normal or abnormal.

THE HEALTH OF THE ARMY, 1908.

SIR ALFRED KEOGH, K.C.B., in presenting, as Director-General of the Army Medical Services, his report on the health of the troops at home and abroad,[1] is able to make the gratifying statement that the decline in the incidence of sickness which has been shown for several successive years continued in 1908. When the statistics for last year are compared with those for the decade ending 1898, the decline under all heads is remarkable. The admission ratio per 1,000 of strength fell from 997 to 573, the ratio of constantly sick from 59.85 to 32.28, that of invalids sent home from 26.56 to 15.91, of invalids finally discharged from 15.36 to 10.32, and of deaths from 9.03 to 4.78. During the past decade the effective strength of the army, as indicated by the fall in the constantly-sick rates, has been raised by 5,776 men, and the wastage through death and invaliding reduced by 2,900 men a year, or at the rate of a division of troops for each decennial period. Another way of looking at the matter is that the improved health of the troops has made it possible to reduce the number of hospital beds at home stations by over 2,200, and a similar reduction is being carried out for stations abroad. Not improbably some wiseacres will, having read the report thus far, repeat the suggestion of one of their fraternity, who is, or was, an M.P., that the medical staff of the army should also be reduced, as there are fewer sick to treat. It really seems impossible to get into the heads of some people the obvious proposition that prevention is better than cure, but requires as much scientific knowledge and vigilance. It will be almost hopeless to expect them to read on to the next sentence in the report, which enumerates the causes to which the improvement in the health of the army are to be attributed; these causes are changes in medical administration, improved methods in the treatment of disease, improved sanitation, and greater care and uniformity in recruiting. In the fuller notice of this interesting report, which will be published in an early issue, the operation of these various causes and their relative importance will be considered.

[1] Army Medical Department Report for the Year 1908. Vol. I. London: Wyman and Sons; Edinburgh: Oliver and Boyd; Dublin: E. Ponsonby. 1909. [Cd. 4933.] 2s. 8d.

THE TREATMENT OF SCHOOL CHILDREN IN HAMPSTEAD.

DURING the course of last year, the Hampstead Division determined to make an effort to form a public medical service. The local profession was called together and an organizing committee was appointed. In the course of the deliberations of this committee, suggestions were made by the Hampstead Council of Social Welfare, with a view of strengthening the position of the proposed medical service. Members of the Division took part in conferences, which were held under the auspices of the Council of Social Welfare. Although no assistance was sought in respect of the organization of the Hampstead Public Medical Service, and the work was completed entirely by the efforts of the local profession, with the advice of the Division, it became apparent from an early date that the Council of Social Welfare desired to play some, and probably an important, part in the work which was to be undertaken. In the autumn of the current year Mr. Hancock Nunn, the leader of the Council of Social Welfare, appears to have made certain proposals to the London County Council with respect to the treatment of the school children found on inspection to be defective. On the ground of these proposals certain practitioners were approached through the provident dispensaries by Mr. Nunn, who suggested that as the children were urgently in need of treatment, these gentlemen should undertake the duty of looking after the children. The Kilburn Provident Institute refused to have anything to do with the scheme, on the ground that Mr. Nunn's society was not the proper body to undertake negotiations. But a few members consented to do the work on the distinct understanding that the matter was urgent, and that it was a temporary arrangement. To this course the Division assented. A meeting of the Council of Social Welfare was called, and was attended by the representatives of the Division; the Education Officer and the Medical Officer of the Education Department of the London County Council were present. The scheme which Mr. Nunn had laid before the County Council was discussed, in the course of which the members of the Division objected to Mr. Nunn's statement that the medical profession in Hampstead had fully approved of his scheme. After further negotiations the London County Council, with the full concurrence of the Division, accepted Mr. Hancock Nunn's scheme, pending the preparation of a permanent scheme, which the profession would lay before the London County Council. In the meantime the Public Medical Service had been inaugurated. The conditions of membership are practically the same as those applying to other public medical services. Under these conditions, it was felt that any arrangement which the London County Council and the profession might agree upon must be outside the Public Medical Service though under its control. A scheme was drawn up by a subcommittee of the Hampstead Division, which was submitted to the Public Medical Service. After certain amendments had been agreed to by both bodies it has been submitted to the County Council for consideration. There is reason to believe that the suggestions made will be accepted in the main by the Council. Under the proposed permanent scheme, any member of the Public Medical Service has the right at the commencement of each year to indicate whether he or she will undertake the treat-

ment of the children. The plan which is aimed at, and which the County Council appears to favour, is that in the first place the children should be referred to the family doctor. If the parents cannot afford to pay the usual fees, the child may be entered as a member of a family into the Public Medical Service, and would then receive treatment from the medical officers of the service like any other patient. Failing this, the County Council undertakes the responsibility of providing treatment, and practitioners who have agreed to act for the Council will be called upon to carry out the treatment. The parent shall have the right to select any practitioner from the list of those who are willing to act. The treatment is to be carried out primarily at the practitioners' homes, but certain cases may be referred to the two centres which, it is understood, will be handed over by Mr. Nunn to the Public Medical Service. The main difficulty is as to remuneration. The County Council has hitherto undertaken to pay for the work at a fixed sum per half school day per week. With an unlimited number of participants such a scale becomes impracticable. The terms suggested are 6s. per case and a few extra fees. The basis of this suggestion was that while the hospitals were receiving about 4s. or 5s. per case with all the facilities of centralization, the private practitioner might fairly ask to be paid on a slightly higher scale. At the same time it was felt that these terms would not be remunerative, and an extra fee for anaesthesia in cases of operation has been suggested. On the other hand, this sum may need subsequent adjustment. The whole question turns on the average number of attendances required for the cases. The County Council works on the supposition that this average will work out at 3. If this were so—which is a large assumption—the terms asked would be comparatively high; but if the views of the Hampstead practitioners are nearer the truth, that the average will work out at about 15 to 20, then the fees would require to be raised later. It now remains to be seen what the County Council will do with the scheme.

SIR ALFRED JONES.

ALL those members of our profession who know the great services rendered by Sir Alfred Jones, of Liverpool, in the promotion of the investigation of tropical diseases will have heard of his sudden death with deep regret. We are indebted to Sir Rubert Boyce for the following tribute to his work and to his memory: "The death of Sir Alfred Jones, K.C.M.G., suddenly and in the very midst of his work, up to the very last surrounded by his stenographers and secretaries, removes from our midst an empire builder—another Rhodes. A man of immense grasp and great ideas, but not ambitious in the narrow selfish sense. Yes, certainly ambitious for the welfare of his fellow-man, ambitious to see all around him succeeding, ambitious to live to see our country, our empire, succeed, and come out top in the race of life. Sympathetic as a woman. A more kindly sympathetic nature I have never encountered. With lightning rapidity he put himself in accord with all who approached him in this characteristic, displaying the very best quality of the Celtic race, to which he was such an ornament. To many the late Sir Alfred may appear as the successful business man, a rival of others, and therefore necessarily hardened; but to those who were privileged to know him intimately, he was the personification of goodness of heart, childlike simplicity, and lovability. To-day he is mourned not only in the British Isles and in the great British Empire, but throughout the civilized world, for foreign nations, better tuned to comprehend the vivid Celtic temperament, regarded him as one of the very great men of our time, a man whom they understood and whom they knew understood them. He will indeed be mourned by all classes of society, but perhaps by none so keenly as by our own profession, for which he always had a most profound respect and admiration, for ever recalling acts of its devotion and heroism and self-abnegation. I well remember how, at a medical banquet given by the Royal Southern Hospital some years ago, he had, in the space of less than five minutes, clearly grasped the significance and possibilities of the tropical medicine movement, which had just been started by Sir Patrick Manson and Mr. Chamberlain. He there and then determined to act, and before the repast was finished the Liverpool School of Tropical Medicine was founded. Not another man in Liverpool could have grasped the situation. It was not that Sir Alfred knew much about medical or scientific discoveries. He instinctively felt, in his wonderfully receptive and imaginative mind, that here was a new cause, for the advancement of which men had already sacrificed a great part of their life—a cause, moreover, which he clearly saw would open up vast territories to civilization and commerce, and above all a movement which, if it succeeded, would relieve suffering. Sir Alfred Jones's association with the tropical medicine movement is in my opinion the greatest of his many great achievements. He was intensely proud of the success of the movement, and was ever ready to help and to get others to help. He founded the Chair of Tropical Medicine. But from long intimate acquaintance I can truly say that what most contributed to the success of the movement was not the money which he and others put into the movement but the truly magnificent and stimulating example which he himself ever presented to us, exhorting us continually to go into the tropics, into unexplored fields, and investigate for ourselves. He literally flung us into the tropics; his ships were always waiting to take us away, and as fast as men presented themselves so they were carried to the seat of their labours. And what a gain this method has been to the advancement of medical research and discovery the world knows to-day and reaps the reward. This, too, was the reward of the instigator of it all, for he cared nought for personal reward, living in the most quiet and simple manner. Only a few days ago he was looking over his numerous decorations; for almost every country had given him an Order. He smiled as he looked at them, and, turning to me, said, 'It is nice to get them. I like the appreciation; it stimulates a man to go ahead and do better still.' He valued life and its rewards because they put him in a better position to do good. 'It is not the amount of money you have; it is the capacity you possess of doing something to make the world better than you found it when you came into it.' A few Sundays back my conversation with him turned upon church-going. 'Ah,' he said to me, looking round at his stenographers and secretaries, 'I must throw myself upon the mercy of the court.' He little dreamt then that the trial was so near. It has come, and we do not fear the verdict which will be passed upon a man whose life was spent making the world better by exhausting himself prematurely, striving to make the world better than he found it."

QUEENSLAND UNIVERSITY.

THE Government House Buildings, Brisbane, were, a telegram in the *Daily Telegraph* states, dedicated as the home of Queensland University on December 10th. Sir William Macgregor, G.C.M.G., M.D., the

Governor, who performed the ceremony, read a message from the King congratulating the people of Queensland, and hoping that the enterprise and loyalty which had marked the first fifty years of the existence of Queensland might be an abiding heritage, and that the prosperity of the State would be multiplied abundantly in years to come. Mr. Kingston, the chief secretary, said that £50,000 had been set aside for initial expenditure, that the annual grant for working expenses will be £10,000, and that there will be sixty foundation scholarships. Sir William Macgregor assented on behalf of the King to the University Bill, and unveiled a tablet dedicating the building. He expressed the pleasure with which he took part in a ceremony of such historic, social, and economic importance, establishing the corner-stone of a system of State education. The university course, he said, would, without unduly encroaching upon more modern developments of direct utility, include arts and classics. The plan was elastic, affording opportunities of unlimited expansion, and the university was untrammelled either by vested interests or threadbare traditions. The gift of the building was accepted on behalf of the people by Mr. Bell, Speaker of the Legislative Assembly, and congratulatory addresses were delivered by Professor David on behalf of the Sydney University, and by Professor Stirling, Professor of Physiology in Adelaide University, on behalf of that body.

A PRIZE FOR A CURE FOR CONSUMPTION.

A PERSON, whose name has not been divulged, has, we learn from the *Medical Record*, offered a prize of £20,000 for the discovery of an absolute cure for tuberculosis. Yale University is the custodian of the prize, and the physicians attached to the Yale Medical School are to act as trustees. The trustees have invited several well-known physicians to become members of an advisory board which will pass judgement on the merits of the cures submitted. Among them are Dr. E. L. Trudeau, of Saranac Lake; Dr. Simon Flexner, of the Rockefeller Institute; Dr. William H. Welch, of Johns Hopkins University, Baltimore; Dr. Lawrence F. Flick, of Philadelphia, and Dr. Herman Biggs, Chief Medical Officer of the New York Department of Health. The prize is open to all competitors in any part of the world. The money will be held in trust it is understood, and the interest from it will go toward investigating any cures the trustees or members of the advisory board hear of but that are not submitted to them for examination. The advisory board intends to hold four meetings a year, and will hold others if the cures or alleged cures that are submitted warrant it. One of the duties of the advisory board will be the exposure of "fake" consumption cures which may come to their notice. In order that the advisory board and the trustees may not be bothered with bogus remedies, one of the restrictions in the deed of gift is that the remedy must have been in use for five years and must be backed up by reliable testimonials that it has resulted in cures.

DR. LUDWIG MOND.

BY the death of Dr. Ludwig Mond, F.R.S., the whole world of scientific research has lost a valuable member. During the past few years he had been in failing health, and two or three weeks ago serious symptoms showed themselves. Born close on seventy-one years ago in the town of Cassel, Dr. Mond spent his school and university days in Germany, where he studied chemistry under Kolbe and Bunsen. At the age of 23 he came to England to serve in the chemical works of Messrs. Hutchinson and Earle at Widnes. There he devised a method of recovering the sulphur which was a waste product as calcium sulphide in the Leblanc soda process. His next great work was one in which his inventive genius was rather less brought into play than his excellent insight into the possible combination of commercial interests and scientific methods. He had examined Dr. Ernst Solvay's method of preparing sodium carbonate from brine by the action of carbonic acid and gaseous ammonia. This method was just the thing which Mond was seeking, since the reaction was completed without any intervention of sulphur, and was therefore economical and satisfactory. Having received the necessary licence from Solvay, Mond entered into partnership with Mr. (now Sir John) Brunner, and started the alkali works at Winnington in Cheshire. There he exhibited remarkable skill in overcoming technical difficulties and in adapting a chemical reaction to industrial purposes. In 1879 he introduced a highly important power gas, derived from bituminous slack by treatment with a blast of air charged with superheated steam. The gases produced were brought into contact with sulphuric acid, which removed the ammonia. At a later date Dr. Mond not only turned his attention to other problems of industrial chemistry, but also employed a number of skilled chemists to work at various problems. In his laboratories, in 1889, experiments undertaken for a totally different purpose led to the discovery of the metallic carbonyls. Drs. Langer and Quincke, at that time working under his direction, discovered the tetracarbonyl of nickel. The discovery was put to profitable use, in introducing the most economical process of preparing pure metallic nickel. Among Dr. Mond's good qualities must be placed first his liberality to scientific research. In 1891 he was elected a Fellow of the Royal Society, and it was through his stimulation and financial assistance that the great international catalogue of scientific papers is being compiled. He further gave material support to the researches carried out in connexion with the Royal Institute, and founded the Davy-Faraday Laboratory, for research in pure and applied science. He was an active member of the governing body of the Lister Institute of Preventive Medicine till a few years ago. Here, too, he gave freely of the wealth which his scientific and commercial genius had enabled him to amass. Those who knew him personally will miss a kindly and sympathetic friend; those who worked with him will miss a man of unusually gifted mind, whose direction ensured success, and whose supervision was an education in itself.

THE MEDICAL SERVICE OF THE NAVY.

THE medical service of the Royal Navy is, we have reason to know, seething with discontent. The officers have several legitimate grievances, which we have been asked to ventilate. We have refrained from doing so in the hope that the matters complained of might be put right by the Admiralty of its own accord. Some time ago a Committee of Inquiry was appointed. The chairman was Admiral Durnford, and it included among its members, in addition to the Director-General of the Naval Medical Service and the Director-General of the Army Medical Services, two eminent surgeons—Sir Watson Cheyne and Mr. Lenthal Cheatle—not officially connected with either service. The report of the committee has, we believe, been in the hands of the First Lord of the Admiralty for a considerable time, but nothing has been allowed to transpire as to its recommendations, and

nothing has been done to remedy the state of affairs in the Service. Mr. McKenna's policy in certain other regions of naval administration would seem to be that of Fabius—*unus qui nobis cunctando restituit rem*; perhaps he is also trying to save the situation in regard to the medical service by delay. But the Service and those interested in its efficiency are getting restive; and we venture to suggest that he should make public the report of the committee as soon as he can find time to think of anything outside the electioneering campaign. Is he waiting to hand the problem over to his successor?

FOOTBALL CASUALTIES IN AMERICA.

According to the American papers the number of deaths resulting from hurts received on the football field during the present season in the United States is 30, while there have been 216 cases of severe injury This is said to be the largest number of football casualties during the nine years in which they have been recorded. The most frequent cause of death was fracture—dislocation of the cervical vertebrae with crushing of the cord. The list of injuries included 19 cases of concussion of the brain, 19 of fractured rib, 19 of sprained ankle, 15 of fractured leg, 12 of fractured clavicle, and 9 of broken arm. Football is at best a rough form of sport; the other day in the Oxford and Cambridge match, Oxford had two men *hors de combat* part of the time, and may be said to have won their victory with thirteen men against fifteen. But the football "butcher's bill" in this country is small compared with the American, and this although our players do not wear defensive armour over the ears and other easily vulnerable parts as is, we believe, found to be necessary in the United States. Surely the murderous character of the game could be mitigated without in any way spoiling the *gaudium certaminis* of the players. A manly sport should not be allowed to be degraded into a brutal fight in which the deliberate maiming of opponents is part of the "game."

THE COMING GENERAL ELECTION.

Since the publication of the paragraph on this subject last week, Surgeon-General G. J. H. Evatt, C.B., has accepted an invitation to contest Brighton in the Liberal interest, and it has been announced that Dr. Thomas Laffan, of Cashel, will be a candidate for Mid-Tipperary. Considerable interest attaches to the election in East Marylebone, where Dr. R. O. Moon is the odd man in a three-cornered contest. At present the attempts to heal the division in the Conservative and Unionist ranks have failed, and, politics apart, Dr. Moon would be a most appropriate candidate to represent a constituency in which the medical vote is so large and influential. Within East Marylebone is included Cavendish Square, Harley Street, Wimpole Street, and other quarters where physicians and surgeons congregate. Dr. Moon is a graduate of Oxford, where he took the degree of M.D. in 1900; he is physician to the Western General Dispensary and to the Royal Waterloo Hospital. Owing to the resolve of Sir John Batty Tuke not to offer himself again for election as the Parliamentary representative of the Universities of Edinburgh and St. Andrews, the medical profession stands to lose one representative in the House of Commons, for Sir Robert Finlay, K.C., Attorney-General under the last Conservative Government, has been adopted by the Conservative Association as its candidate. We understand that it is probable that a medical candidate will stand, but the final selection has not yet been made. In the circumstances, medical graduates will probably feel it desirable not to pledge themselves definitely until the position is made quite clear.

MEDICAL SERVICE TERRITORIAL FORCE.

The Territorial Forces Committee, appointed at the last meeting of the Council of the British Medical Association, held a meeting on December 7th, when a number of matters affecting the medical services of the Territorial Force were considered. Among other matters were two which have been the subject of correspondence recently in the Journal. One of these is with respect to the instruction of members of Voluntary Aid Detachments. The Committee expressed the opinion that no medical man should be expected to give instruction in first aid and field nursing without suitable remuneration, but that officers in command of Voluntary Aid Detachments should keep their detachments efficient without remuneration. The other subject was that of the nursing service; the attention of the Committee was drawn to a letter in the Journal of December 4th regarding nurses of a cottage hospital being enrolled in the Territorial Nursing Service, and the Committee recorded its opinion that in such a case as that described the nurses should be allowed to join the service, and that the hospital should be placed at the disposal of the authorities in time of war, with the reservation that the nurses should not be withdrawn from it.

The Nobel Prize for Medicine has been awarded to Dr. Theodor Kocher, the distinguished Professor of Surgery in the University of Bern. Professor Kocher was born in Bern in 1841, and studied medicine in the university of his native city, and afterwards in Zurich, Berlin, London, and Paris. He took his doctor's degree in 1865, and was appointed to the Chair of Surgery in the University of Bern in 1872. He is the author of numerous contributions to surgical literature, the most noteworthy of which are on the surgical treatment of goitre and the results of extirpation of the thyroid gland.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

The Parliamentary Session.

The Parliament elected in 1906 has beaten its previous record of hard work in the session just closed, sitting as it did in eleven months out of the twelve with no long break during the whole period. The contentious character of the Budget proposals, which were under discussion for six months in the Commons, accounts for the prolongation of the labours of Parliament much more than the number of bills passed or discussed in the Chamber. Indeed, as regards its output the session has been less productive than that of last year.

This session the total number of bills introduced was 272, as compared with 308 in 1908. Of these 272, 59 were Government bills, 5 departmental bills, and 208 were introduced by private members. The Government passed forty-one of its measures and five small Departmental Acts, while the private members, although in some cases helped by Government assistance, only succeeded in placing nine Acts upon the Statute Book, or less than 5 per cent. of their pro-

posals. It is noteworthy that the ballot for places for private bills, which is held at the commencement of every session, and which attracted 353 members to try their luck last February, was singularly unproductive, for not one of the members who drew a good place in the ballot succeeded in getting his measure passed into law.

The forty-one Acts passed by the Government this year are, with one notable exception, of little interest to the medical profession. The exception is the Housing and Town Planning Act, which has been discussed on several occasions in the pages of the JOURNAL, and promises to do much for the better housing of the poor and the orderly development of urban areas. Dealing as it does very largely and very closely with public health problems its passage, after being before Parliament for four successive sessions, is a matter for hearty congratulation. The other Acts which remotely affect public health are the Acts aimed at unemployment, namely, the Labour Exchanges, the Trades Boards and the Development Act, while the Assurance Act may also be mentioned as an Act of some interest to those of the profession connected with insurance work.

The nine Acts passed by private members include four which have a clear medical interest. They are the Metropolitan Ambulances, the Health Resorts and Watering Places (Ireland), the Asylum Officers' Superannuation, and the Oaths Act. The second of these is a small but useful measure for enabling the local authorities of Irish health resorts to use public funds for the purpose of advertising the attractions and special advantages of their respective localities. The passing of the bill was not altogether unattended with difficulty, as the first attempt was withdrawn, and the second bill, which eventually became law, was commended to the Upper Chamber by the support it had received from all parties in the Commons. The Metropolitan Ambulances Act had a relatively quiet time in the Commons. It imposes on the County Council the duty of instituting and maintaining an ambulance system for accidents, and was appropriately fathered by Sir William Collins, as ex-Chairman of the London County Council. The Government gave it support in the Lords, as it was largely founded on a report of a Home Office Committee. The Asylum Officers' Superannuation Act was lucky in getting a second reading late one night in the Commons and in being referred to a Select Committee. The Committee reported favourably, and it was only in the Lords that its difficulties began; these were, however, surmounted by tact and patience, and a useful measure has been placed on the Statute Book. The Oaths Act, which was in charge of Mr. Bramsdon, who is coroner as well as member for Portsmouth, is a distinct gain from a public health point of view, as it does away with the dirty and insanitary method of kissing the book.

The Local Education Authorities (Medical Treatment) Act which the Government assisted to pass is a small measure enabling local authorities to recover the cost of medical treatment of children when provided under Section 13 of the Education (Administrative Provisions) Act, 1907.

Among the lost bills connected with public health interests we have to deplore the inability of the Government to pass its Milk Bills for England and Scotland. These measures have been repeatedly promised and are long overdue. Among the 200 private members' bills which were lost there were over 20 dealing with subjects affecting medicine or sanitation. There were five bills dealing in different fashions with vivisection, but none of them received a second reading, and only one—the Dogs Exemption—obtained a short discussion late at night. There were three bills dealing with the registration of nurses, five dealing under the name of public health with sewers and drains and water supply, as well as the Public Health Officers Bill for giving security of tenure to all health officers. The late Dr. Cooper introduced two bills dealing with the administration of anaesthetics, and Mr. Greenwood introduced a measure for a better method of death certification. There was also a Coroners' Inquests Bill, and we may name another old friend, which will come up again, the Daylight Saving Bill.

Questions were used this year in an increasing degree to call the attention of Ministers to matters connected with medicine and public health, as the following list of titles will show: Importation and inspection of meat, Irish Poor Law relief, the Royal College of Surgeons and the admission of women, vaccination (very frequently), tuberculosis, cost of medical inspection, London University, Indian Medical Services, Malta fever, plague, experiments on cats, vermin destruction, notification of infectious diseases, water supply, tuberculous milk, factory surgeons, glanders, death-rates in England and Germany, sight tests for mercantile marine, sanitary state of Island of Lewis, medical relief and old-age pensions, Malta fever, the Inebriates Acts, infant mortality, medical fees in cases of street accidents, Chinese pork, small-pox at Bristol, accidents to railway servants, typhoid carriers, patent medicines, feeding Suffragettes, the cost of vaccination, etc. In several instances the answers to questions involved the publication of tables of valuable statistics which have been published in our weekly Parliamentary notes.

This year there have been some interesting discussions on the Estimates, the first of which was introduced by Mr. Haldane on the vote for the army. He referred at some length to the improvement in the Army Medical Department, and alluded to the excellent work done in many directions. His remarks on antityphoid inoculation and Malta fever were criticized by Mr. Lupton. When the Home Office vote was considered, Sir Charles Dilke spoke strongly about the excessive infant mortality in the towns where mothers worked in factories, and urged stronger action by the department, especially with reference to the maiming of young workers. Lead poisoning in relation to the results obtained by the Home Office rules and the effects of dust in causing pulmonary diseases were also discussed.

On this vote also Mr. Greenwood raised the whole question of vivisection on the administration of the Acts by the Home Secretary. There was an animated debate for a time, and Mr. Gladstone defended his Department and the action of the inspectors, who, he said, were faithfully discharging their duties. When the report of the Royal Commission was presented the whole subject would be reconsidered.

On the vote for the Local Government Board there was this year a long debate, which began with the treatment of workhouse children and the system of boarding-out, and passed on to the desirability of classification in the maternity wards of workhouses. The vaccination question was next raised at length by Mr. Lupton. Mr. Burns, in his reply, gave a very full account of the different methods of treating children and the costs of each. He also gave an analysis of the results of the working of the Notification of Births Act, and entered at length into the subject of infant mortality.

On the Budget resolution, the proposed rebate of the motor-car tax in favour of medical men was the subject of several speeches, and the concession made to the profession was warmly defended by the Chancellor of the Exchequer.

In the Lords, the Archbishop of Canterbury initiated a discussion on the report of the Royal Commission on the Poor Laws, and gave a very interesting analysis of the two reports. Lord Crewe, speaking for the Government, admitted the urgency of the question, and the widespread desire that legislation should not be long deferred. Surveying the work of the whole session, no great medical advantages emerge with the one exception of the legislation for the better housing of the working classes. A great number of other matters have, however, received attention, and every Government department has in turn been attacked by the method of interrogation on topics of medical interest as they arose. It is satisfactory, therefore, to conclude that, in this Parliament possibly more than in any preceding one, public health questions have been frequently and more generally in evidence.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER AND DISTRICT.

THE MANCHESTER ROYAL INFIRMARY AND MEDICAL WOMEN.

THE report of the Board of Management of the Manchester Royal Infirmary, given in full last week, concerning the appointment of medical women to resident posts has caused considerable resentment, and a meeting of the Northern Association of Medical Women last week expressed the unanimous opinion that the report was unfair, and that the board could not for any length of time assent to the views expressed in it. The separate points in the report were discussed, with the result indicated below:

1. The statement that no male and few female patients prefer to be treated by medical women is valueless, as the patients, when asked by those in authority at the infirmary, could hardly give an unbiassed answer. It could be shown that in hospitals where the patients have a choice there is a demand for medical women.
2. The male surgical patients so much brought forward by the board are not the only patients, and there are female wards where medical women would be particularly desirable, and there is ample work for a woman resident apart from attendance on male patients.
3. The accommodation which the board considers necessary for women residents is excessive. Accommodation for one, or at most two, would be enough, and the association thinks this could easily be obtained in the existing buildings. On this point the board might well get the opinion of a medical woman. As to the cost, if the board did not feel justified in spending the amount needed for the necessary alterations, medical women would be prepared to help in raising it. There was no necessity at all for a lady assistant medical officer to supervise the women residents.
4. The women students never dreamt that the resident posts would be denied to them in the new infirmary, and had not thought it necessary to urge their own special claims. A medical woman had made an application in 1906, while the old infirmary was in use, and no statement was made at the time that future applications would not be considered.

There are something like eighteen resident posts, and as most of them are only tenable for six months, there are over thirty vacancies a year. Every man student who desires a post can get one, and it has even happened that there has been no Manchester applicant and an outside graduate has been appointed. That being so, it is urged that it is particularly unfair that women should be debarred altogether. The association therefore held that the conclusions of the board were not established, and protested against (*a*) the statement that medical women would be less valuable and beneficial officers than men; (*b*) the estimated cost of the innovation; and (*c*) the injustice of the treatment of the medical women graduates of the Manchester University.

In addition to the above protest by the Northern Association of Medical Women there have been numerous letters in the Manchester press, all urging the same objections to the decisions of the Infirmary Board.

THE MINORITY REPORT OF THE POOR LAW COMMISSION.

A meeting organized by the Manchester branch of the National Committee for the Break-up of the Poor Law was held in the Manchester Free Trade Hall last week. The Dean of Norwich, who was advertised to preside, telegraphed that he was unable to be present, owing to illness, and the chair was taken by Mr. F. Brocklehurst. Sir John Gorst was also unable to be present, owing to his election work at Preston.

Mr. Sidney Webb explained how the Poor Law was reconstituted in 1834, and pointed out that later Parliament set up a new authority, the public health authority, and by this means introduced such overlapping that there was great confusion up and down the country and unnecessary waste of public money. The result was that sick persons were not looked after so well as they ought to be. On this account the Minority scheme proposed to transfer the sick from the Poor Law to the local health authority. It proposed to have a unified medical service, with treatment at the public expense. To-day, he said, school children were being fed by two authorities, while the aged, the feeble-minded, and the able-bodied unemployed were all being cared for by two authorities.

Mr. G. Bernard Shaw dealt specially with the unemployed, and said he wanted to know why the man who was unemployed should not be paid for being unemployed. If an intelligent nation were to make any distinction at all, it would stop paying a man as soon as he got into work and only pay him as long as he was out of work. He suggested that just as we kept our army and navy in training for times of need, so the nation ought to maintain its industrial army. We should never get rid of poverty unless we organized the unemployed and exacted from a man that he should be ready for work. As to the cry of socialism, he said all the schemes put forward were socialistic.

Mrs. Sidney Webb said that both the Majority and the Minority reports showed that the Poor Law was wholly rotten. The Minority scheme, though it had nothing to do with nationalization of the means of production and distribution, was socialistic in the sense that it was a system of caring for the poor by the State.

It is understood that the Manchester branch of the National Committee for the Break-up of the Poor Law intends during the coming winter to undertake a vigorous campaign in favour of the Minority scheme, and no doubt all the influence that can be brought to bear on the Parliamentary candidates for the district will be exerted.

HOPE HOSPITAL.

The Salford Board of Guardians have been extremely indignant at some criticism made by Sir Henry Burdett in an article which he contributed to *The Hospital* on Poor Law infirmaries in general. The Hope Hospital committee had considered the article, and recommended the board to pass a strong resolution denouncing the reference made in the article to the hospital. The reference in question is as follows:

> Some of them (Poor Law infirmaries) are of the Charles Dickens type, like the Salford Union Workhouse Infirmary at Hope, which has far too long been allowed to shock the public conscience by the inefficiency and incapacity of the board of guardians who have had it at their mercy.

The chairman of the board said the reference was both misleading and untruthful, and he flung back with indignation the charges made. A lady guardian thought the guardians were making themselves unduly excited about the article. Mr. Lowry, the Local Government Board inspector, who was present, rather agreed that the guardians were making a little too much of the attack. He had complimented the guardians on Hope Hospital, but had never said it was perfect, and did not consider it was. There were still improvements to be made, and he was sure the guardians would not allow their love of economy to stand in the way of efficiency. Eventually the board passed a resolution declaring that the article was "a scurrilous and unwarranted attack on the members of the board," and added that the guardians would invite the fullest possible investigation by any unprejudiced person with a view to proper comparison with other Poor Law or general hospitals.

It may be pointed out that the "Warning Notice" with reference to the appointments of resident medical officers at Hope Hospital have been in the BRITISH MEDICAL JOURNAL and the *Lancet* since the end of July. The place is staffed by two locumtenents. Not the slightest attempt has been made by the guardians to satisfy the legitimate demands of the medical profession as represented by the Salford Division of the British Medical Association. The Salford Division entirely agrees with Mr. Lowry that Hope Hospital is not perfect, and there are still improvements to be made. This is putting it in the very mildest terms. It is currently reported that the guardians have received certain recommendations from the Local

Government Board inspectors, which, if rightly understood, would greatly improve the administration; but it would almost appear as if the guardians were complacently satisfied with things as they are. It is necessary to assert once again that very few other people share their satisfaction, and least of all the local medical profession; and, further, that until the guardians demonstrate in deeds—not simply in words—that certain reforms, of which they have been fully informed, have been undertaken, the Salford Division cannot advise any medical man to accept the post of resident medical officer at Hope Hospital.

THE DAVID LEWIS EPILEPTIC COLONY.

At the annual meeting of friends of the David Lewis Epileptic Colony at Alderley Edge, near Manchester, it was reported that the number of inmates at the beginning of the last year was 218, which had increased in August to 231, of whom 101 were adult males, 88 adult females, and 42 boys and girls. The daily average of colonists in residence during the year was 220, against 196 in the previous year. This increase had only been possible by the completion and occupation of the new house for men, which had accommodation for 32. The accounts showed a favourable balance of £1,040, and the committee had transferred from the general fund to the maintenance fund a sum of £500, out of which they were able to make small weekly grants to assist the poorer class of colonists who might not be able to pay the full weekly charge. But a great increase in the maintenance fund was still needed to enable the committee to assist the great number of deserving cases that came under their notice. Dr. Alan McDougall, the director of the colony, stated in the medical report that a few of the adult colonists left the colony free from fits, but cure in well-established epilepsy was uncommon, and most of the cases came too late to be cured. The children, however, gave brilliant results, as one-third of them became free from fits. Five years' experience seemed to show that if all children were sent on the first appearance of epileptic symptoms to an epileptic colony and kept there till the end of their school life, the benefit to themselves, their relatives, and the State would be enormous.

LONDON.

FEEDING OF SCHOOL CHILDREN.

THE London County Council on December 14th received a report from the Finance Committee calling attention to the growing cost of the provision of meals for necessitous children. The Committee advised that only £15,000 of the supplemental estimate of £25,000 asked for by the Education Committee[1] be approved until the administration of the Provision of Meals Act, 1906, had been revised. Last year, when the funds were provided partly by the Council and partly by voluntary agencies, 4,546,000 free meals were provided. This year the original estimate of six millions had had to be increased to 7,702,000, or 70 per cent. more. The total cost was estimated to be £62,265 for the twelve months. The Finance Committee had asked the Education Committee to reconsider their methods of administration in this regard, and had pointed out to them that the principle which should be followed, not only as to feeding, but also as to medical treatment, was that recovery of the cost from parents should be the rule and not the exception. Only £26 had been obtained from parents in six months. The estimate of £15,000 was approved, the Finance Committee promising to present a further report before the money was expended.

MIDLANDS.

THE COVENTRY PROVIDENT DISPENSARY.

THE following paragraph appeared in a recent issue of the *Midland Daily Telegraph*:

Dr. McVeagh is retiring at the end of the present month from the medical staff of the Coventry Provident Dispensary after a service to that institution extending over an unbroken period of more than half a century. In his letter of resignation, which has been placed before the General Committee, Dr. McVeagh states that he is very reluctant to leave the dispensary, which he regards as the best method of providing medical attendance, and as being superior to any other club practice. The committee of the dispensary have accepted the resignation with very sincere regret, and have appointed Dr. McVeagh honorary physician to the dispensary.

It is of interest to note that Dr. McVeagh's first association with the dispensary dates back exactly fifty-seven years. At the time of his appointment the medical staff consisted of two doctors only. To-day there are five, the result of the great increase in membership of the dispensary, an evidence of its great popularity.

The committee have unanimously appointed as Dr. McVeagh's successor Dr. J. W. Farrell, of London, who is both a physician and surgeon, and whose abilities are very highly spoken of. Dr. Farrell enters upon his duties at the dispensary at the commencement of December. Meanwhile, Dr. McVeagh will continue to see patients at the dispensary as hitherto. He has taken up his residence at Kenilworth.

Dr. McVeagh's view as to the best method of providing medical attendance is not that held by the Association, and does not seem consistent with some of the views he has previously expressed; but in view of the fact that he is retiring on account of age we have no desire to emphasize these inconsistencies. In regard to his successor, it will be noted that he has the advantage of combining in his own person both the qualifications of a physician and the attributes of a surgeon. We should tender to the committee of the dispensary our congratulations on the attainment of such a combination were it not for the fact that for the past twenty years it has been compulsory on all medical men, newly qualified, to obtain this distinction. According to the *Medical Register* Dr. J. W. Farrell qualified last year, and registered on December 14th, 1908.

WALES.

EPIDEMIC OF MALIGNANT MEASLES.

AN epidemic of measles of a most malignant type has broken out at Aberbargoed, Pengam, Fleur-de-Lis, and Abertysswg, districts situate in the centre of the Rhymney Valley. In one house alone four deaths occurred, and it is said that there are cases in almost every house at Aberbargoed. One medical man has stated that he has attended 1,000 cases, and is still attending 150 cases a day, whilst another has 50 cases. Up to the present time the number of deaths has been 25. Some evidence of the malignancy of the disease may be gleaned from the fact that some of the children have died within twenty-four hours of being attacked. Dr. H. T. Evans, M.O.H. for Bedwellty, and Dr. Rocyn Jones, the county medical officer, are doing all they can to grapple with the epidemic, and eight schools have been closed. The average attendance at these schools is 2,150, and at some of them the "order" is that they remain closed until the New Year, when the question of reopening them will be considered. It is generally considered that the Bedwellty Council is not altogether blameless in the matter, and that there is much to be said against the habits of some of the people. Last year there was an outbreak of whooping-cough at Fleur-de-Lis, and a serious outbreak of scarlatina at Pengam. The more recent returns show that the infantile mortality-rate was alarmingly high—190 per 1,000 births. So serious a view did the Local Government Board take of these figures, that it sent down one of its medical officers, Dr. J. Spencer Low, to investigate. It is due to Dr. H. T. Evans to state that he has frequently drawn attention to the insanitary conditions, such as overcrowding, existing in the district. In his report for 1907 he dealt with cellar dwellings and back-to-back and back-to-earth houses. He urged that there should be through ventilation, and that back-to-back and lean-to houses should not be permitted to remain as separate dwellings. This had particular reference to the Blackwood district. Dr. Rocyn Jones, the county medical officer, has been even more emphatic. In a report he presented to the County Sanitary Committee this year, referring to the Bedwellty district, he pointed out that the infantile mortality-rate was above

[1] BRITISH MEDICAL JOURNAL, November 27th, p. 1574.

the average for the past ten years, and was much too high. Practically all the houses throughout the area are tenanted. He paid a tribute to the Powell Dyffryn Colliery Company, which had taken active measures to prevent overcrowding, and had put up hundreds of houses at Aberbargoed to relieve the pressure. But even then, he said, some of the tenants were overcrowding the houses and keeping them in anything but a clean condition. The refuse of the district was removed to farm lands. The method of sewage disposal at 20 per cent. of the houses was by privies and cesspits. At Pengam, he said, there were back-to-earth houses and cellar dwellings with no through ventilation, damp houses, and overcrowding. It is fair to add that Dr. Rocyn Jones points out that during the past few years many improvements have been effected throughout the district with respect to housing, drainage, and sewerage. Recent inquiries made at Aberbargoed show that some of the people treat the disease lightly, with the result that bronchopneumonia sets in among those attacked. No attempt is made to isolate the sick children from the healthy in their own homes, but this is a difficulty when there are two or more families in one house.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

PRINCIPAL SIR WILLIAM TURNER.

THE freedom of the city of Edinburgh was on December 10th conferred on Principal Sir William Turner. Lord Provost Brown referred to Sir William Turner's long career in connexion with the University of Edinburgh from the year 1854, when he became a demonstrator of anatomy to Goodsir, and to his work as a great teacher and organizer, as a scientific observer, and a distinguished worker in the field of science. In replying, Sir William Turner said he felt that it was not on personal grounds, but in his representative capacity as the Principal of the University, as one who had given his life's service to that institution, that he was privileged to receive the honour conferred on him. The city and the university had been intimately associated with each other for more than three centuries. The great intellectual awakening which took place at the Reformation led the influential citizens of that time to the conclusion that it was necessary that something should be done to raise the means of education in the city to a high standard, and that Edinburgh in that respect should not lag behind St. Andrews, Aberdeen, or Glasgow Universities, which were created by Bulls. The University of Edinburgh was the child of the Reformation. In October, 1583, the college was opened, and the students met in the hall of a house in the Kirk of Field, under a single teacher, Robert Rollock, who had previously taught humanity and philosophy in the University of St. Andrews. No precise record seemed to have been kept of the number of students who attended the opening course, though possibly between fifty and sixty were enrolled, for Rollock, who had been made Principal in 1586, conferred in the following year the degree of Master of Arts on 48 students who had completed the course. At the first opportunity, therefore, the right of the college to confer degrees was asserted and exercised. Such was the beginning of the University of Edinburgh. From that time onwards until 1858 the administration of the property and the rights of patronage over the town's College were controlled by the Provost and Council. Having sketched the rise of the university to a leading rank amongst the universities of Europe, the Principal said the historical relation of the university to the municipality in regard both to administration and patronage had been preserved, although in a qualified form, to the present day. But he ventured to say that the interest taken by the Town Council in the university rested on a wider and deeper foundation than that of administrative co-operation. The citizens realized that in the university they possessed a real and virile asset, which contributed in no small degree to the renown of Edinburgh as a great centre of education, and in its continued prosperity and efficiency they took a proper pride. He hoped the cordiality of thought and action between the municipality and the university might prevail throughout the generations. In a personal reference Sir William Turner recalled the date, fifty-five years ago, when he entered on his duties in the university as an assistant to the Professor of Anatomy. He acknowledged the courtesy accorded him by thousands of students during his long career as a teacher. He thanked his colleagues in the Senatus and University Court for the confidence which they had placed in him in the administration of university affairs. He was proud to have gained the esteem of the Lord Provost and of his predecessors in the civic chair, and to know that his name would now be enrolled, as Principal of the University, in the list of distinguished men on whom the freedom of the city had from time to time been conferred.

At a special meeting of the Edinburgh Merchant Company held on Friday, December 10th, Principal Sir William Turner was admitted an honorary member. At the same time the Earl of Mar and Kellie and the Secretary for Scotland (Lord Pentland) were similarly honoured.

CREMATION IN EDINBURGH.

At a meeting in the Goold Hall on December 3rd, Dr. Aitchison Robertson, lecturer on medical jurisprudence and public health at the Medical School of the College of Surgeons, delivered an address on the subject of cremation, which he described as a desirable method of disposing of the dead, whether regarded from the point of view of hygiene, sentiment, or economy. Sentiment was outraged by the present form of earth burial. The aggregation of dead bodies in churchyards was a great danger to the living, not only by pollution of the atmosphere, but by the greater risk of contamination of water supplies. The objection that cremation got rid of the evidences of crime was hardly tenable, as the method of certification of death was so thoroughly carried out that hardly any case of crime could pass undetected. Before cremation a body must be carefully examined by two medical men, and unless their certificates proved absolutely satisfactory, the medical referee could refuse an order for cremation. The assurance offered in this respect by cremation was much greater than that afforded by ordinary burial. Indeed, many thousands of persons were buried in Great Britain every year despite the absence of any kind of medical evidence as to the cause of death. During the past ten years the practice of cremation had greatly increased in favour in Great Britain, and in Germany was making even more rapid strides. As for cost, a body could be cremated and the ashes placed in a handsome urn, which could be put in a permanent niche, or buried in a grave, at a total outlay very much below that entailed by the simplest form of earth burial as at present carried out. At one crematorium in Paris, bodies were disposed of at the nominal charge of half a crown because of the great number of people desiring to cremate their dead. In this country the cremation of a body cost about £10, while those who belonged to a cremation society had the privilege of free cremation when they died. On the conclusion of the address it was proposed, and unanimously resolved, that steps should immediately be taken to establish an Edinburgh Cremation Society to promote burial reform and the practice of cremation, and that at an early date a temporary committee should summon a meeting for the adoption of a constitution and the election of office-bearers.

HONOUR TO PROFESSOR CLELAND.

The committee in charge of the movement for recognizing the services of Professor John Cleland to Glasgow University will close the subscription list at the end of this month. The committee think it would be eminently suitable to provide as a recognition some

fund for the advancement of anatomical and anthropological science, and the details will be arranged when the amount subscribed becomes known.

THE ST. ANDREW'S AMBULANCE ASSOCIATION.

Sir George T. Beatson, K.C.B., who recently resigned the chairmanship of St. Andrew's Ambulance Association Council, after completing ten years' service, was entertained to dinner last week by the Council, in the North British Station Hotel, Glasgow. In the unavoidable absence of the Earl of Dalkeith, President, the chair was taken by Mr. N. P. Brown, the new Chairman of Council, and amongst others present were Professor Barr, Professor Alex. Ogston, Dr. D. J. Macintosh, Dr. Edington, Dr. Napier, Dr. Willis, Colonel Boyd Anderson, Colonel Stout, Colonel Barnes, and ex-Provost Ferguson.

THE POOR IN THE HIGHLANDS AND ISLANDS.

A correspondent at Stornoway sends us a copy of the following letter, published in the *Scotsman* for November 23rd, and expresses the opinion that in order to present a fair view of the situation it should be published in the BRITISH MEDICAL JOURNAL as an addendum to the article published on November 20th, p. 1476:

Stornoway, November 12th, 1909.

Sir,—As a medical man who has been in practice in the island of Lewis for the past twenty-five years, I read with great interest the article in your issue of the 11th inst. on the "Highland Poor," and your editorial thereanent. The following facts may serve to mitigate the painful impression these are sure to create in the public mind, and, at the same time, free at least a section of the population of the island from the charge of apathy and ineptitude implied in connexion with the points in your article having special reference to the Lewis.

The population of Stornoway parish—the largest in the Lewis, and nearly equal to half the population of the whole island—was at last census 12,842. At the date at which the evidence was submitted, from which you and your writer quote, this parish had six doctors, seven general nurses—five fully trained and two probationers—three fever nurses, six midwives (all certificated), two sanitary inspectors, a fever hospital with twelve beds, and an isolation block capable of accommodating at least two families of ordinary size, a general hospital with twelve beds, two poorhouse infirmary wards, with a convalescent room attached to each, and two wards specially devoted to the treatment of tuberculous cases.

The other three parishes of the island have, in each, a doctor and two trained nurses.

Many people still alive remember when one man had to attend to the medical and surgical needs of the whole island. The writer can readily recall the time when only two doctors were available for the entire population, and then there were neither nurses, hospitals, nor poorhouse accommodation. Surely these statements serve to show that in the matter of medical and nursing requirements the Lewis is not so very far behind other portions of the Empire. With regard to the social conditions in which its people, and especially its poor people, live, perhaps it would lead to a readier dealing with their demerits were reformers to formulate a scheme of amelioration, based more upon the average sanitary requirements of the dwellings of the islanders, than upon extreme instances of glaring sanitary defect, instances which, allow me to say, sir, I have seen equalled, if not surpassed, in certain quarters of your own fair city.—I am, etc.,

MURDOCH MACKENZIE.

GREENOCK DOCTOR'S JUBILEE.

Dr. James Whiteford, Greenock, who has just completed fifty years as a medical practitioner, was entertained last week by his numerous friends. Sir Hugh Shaw Stewart presided, and presented the doctor, on behalf of those friends, with an address and a cheque for £930. A fortnight ago the medical profession in Greenock similarly entertained Dr. Whiteford and presented him with a silver salver and cheque for £100.

THE SPITTING NUISANCE.

For the past few months the Glasgow Corporation Tramways Department has been conducting a vigorous crusade against spitting on cars. Repeated printed notices having failed apparently to make any impression, prosecutions are being undertaken, and a gradual increase in the weekly number of these, from 148 during the third week of October to 268 for the week ending December 4th, is recorded. This campaign in the interest of health and cleanliness must ultimately have its effect, and the department seems determined to put down the evil by this method as the printed instructions on the cars are disregarded.

GLASGOW CORPORATION AND FEES FOR ACCIDENTS.

At a meeting of the Watching and Lighting Committee of Glasgow Corporation a deputation from the Glasgow and West of Scotland Branch of the British Medical Association was received in connexion with the payment of fees to medical practitioners called upon by the police to attend street accidents. The deputation suggested a regulated procedure and the payment of a uniform fee of five shillings. After discussion the matter was referred to a subcommittee for consideration and report.

MEASLES AND SCHOOL CLOSURE.

The Public Health Department has decided to abandon the policy of closing the Glasgow schools during the present outbreak of measles. In his last annual report the medical officer of health discussed the policy of closure and pronounced it useless, concluding that real mischief did not proceed from the school, but from the home and the street. The increase in measles cases each week is very marked, last week's increase being 338, the total number of cases being 2,591. The total number of cases of infectious disease under supervision last week was 4,166.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

R.U.I. MEDICAL STUDENTS.

SINCE the inauguration of the new university scheme in Ireland the Royal University has ceased to exist, and in consequence a considerable number of medical students who have taken out some of their examinations in the late Royal University, but who have not yet completed their full medical course, are in the position of having to select an institution in which they may complete their curriculum and obtain a medical qualification. In order to help those students who may desire to carry on their studies and to take their qualifications under the Conjoint Scheme of the Royal Colleges of Physicians and Surgeons in Ireland, the Colleges have decided that candidates for examination under the Conjoint scheme who have obtained exemption from examination in certain subjects by reason of their having, prior to November 1st, 1909, passed in such subjects at some university or other licensing body, shall be excused from payment of half the fees for the examination or division of examination from which they have been exempted.

It is understood that the Board of Trinity College, Dublin, has also had under consideration the special circumstances of such students, but that up to the present no decision regarding them has been arrived at, although a scheme regulating the admission of art students of the Royal University has already been devised and made public. As this scheme may possibly influence some R.U.I students who contemplated entering a medical school, after completion of an arts course, it may be pointed out that its main provisions are as follows: 1. Students who have passed the matriculation examination of the R.U.I. may be placed on the books of Trinity College as matriculated students on payment of the entrance fee. 2. Students who have passed the first arts examination of the R.U.I. are allowed the entrance and one term examination in Trinity College, Dublin, and are exempted from paying the entrance fee and one half year's fees. 3. Students who have passed the second arts examination in the R.U.I. are allowed to enter as third year students in Trinity College, Dublin, on payment of the fee due at the beginning of that year.

IRISH NURSING APPOINTMENTS.

A good deal of public attention has lately been drawn to the fact that at a recent election to fill the vacant post of lady superintendent to one of the Dublin clinical hospitals, an English lady was appointed, in spite of the fact that there were several Irish candidates in the field. One of the Irish papers in particular was especially scathing in its denunciation of

the hospital in question, and went so far as to urge a discontinuance of the annual grant made to the hospital by the Corporation of Dublin. It appears that out of a total number of twenty-five applicants a list of seven was selected, and that this number included two Irish ladies. These two, however, and also the remaining five were selected, not because they were either English or Irish, but because they were regarded as the most suitable candidates. At the final election no question of nationality was considered, but the candidate who was regarded as the most eligible by the board of directors was chosen, although it was admitted that any one on the selected list was capable of filling the post. Some of those who approve the action of the board have suggested to its critics that their protest and threats may be quoted as a reason for not considering the claims of Irish women who may seek appointments outside their own country, and that if a system of protection against England is adopted in Ireland retaliation is only to be expected.

Drastic Treatment of a Medical Officer.

Under this title the *Irish Times* refers to the treatment by the Rathdown Board of Guardians of a dispensary medical officer, Dr. Eccles, of Delgany, co. Wicklow. It appears that Dr. Eccles was summoned on short notice to attend the winter assizes, and in consequence was compelled to obtain a substitute to carry out his dispensary duties. He asked a neighbouring medical man to undertake the work, and wrote to inform the relieving officer of the district, who acquiesced in the appointment. When, however, the question of payment of the substitute came before the board of guardians, the chairman refused to make out an order for payment, on the ground that it was not the privilege of medical officers to appoint their own substitutes, and that such appointments could only be made by the guardians or the relieving officer. It was pointed out by two of the guardians that Dr. Eccles had only nominated his substitute, who had been accepted by the relieving officer; and, furthermore, that in the circumstances it was difficult for Dr. Eccles to act otherwise, as he lived at a considerable distance from the relieving officer, and had received very short notice to attend the assizes; but in spite of this a motion to refuse payment was carried by 11 votes to 2. This action is quite on a par with the usual treatment meted out to dispensary officers in Ireland. Boards of guardians as a rule neglect no opportunity of inflicting indignities on their medical officers, and of enforcing their own petty authority. In the present instance their action, as reported, appears to be entirely unjustifiable, as if Dr. Eccles had merely written to the relieving officer requesting him to appoint a substitute, and had gone to the assizes, his post as dispensary officer must have been temporarily left vacant until the relieving officer had succeeded in obtaining the services of another medical man. In that case Dr. Eccles would presumably have been exposed to the attacks of the board of guardians for leaving his district unprovided for.

Irish Branch of the British Dental Association.

The annual meeting was held, by kind permission of the President and Council, in the Royal College of Surgeons in Ireland, on December 10th, the President, W. G. T. Story, M.B., L.D.S., in the chair. The Honorary Treasurer presented his report, which showed a good credit balance, and the Honorary Secretary reported a successful year's work, and large increase of membership. Mr. G. W. Connor of Newry was elected President. In the evening the ordinary general meeting took place. Communications were made. At the annual dinner, held in the Shelbourne Hotel on December 11th, about eighty members and guests were present. His Excellency the Lord Lieutenant, who was prevented, owing to the critical state of his son, from being present as he had intended, sent a letter saying how much he appreciated the efforts of the dental profession in combating the ravages of caries in the teeth of the children attending board and national schools. The toast to the licensing bodies was proposed by Mr. K. E. O'Duffy, and responded to by Professor Dixon, Trinity College, Sir Christopher Nixon, and Mr. Robert Woods, Vice-President of the Royal College of Surgeons. The toast to the guests was proposed by Mr. G. M. P. Murray, who took the opportunity to welcome and congratulate Lord Justice Cherry (the late Attorney-General for Ireland) on his elevation to the Bench. It was responded to by Lord Gough, Lord Justice Cherry, and Sir John Moore. Sir Charles Ball proposed the toast to the British Dental Association and the Irish Branch, which was responded to by the President of the British Dental Association, and also by the President of the Irish Branch.

India.

Medical Registration.

A Medical Registration Act has for a considerable time been urgently needed in India, and is now demanded by the medical profession in that country. Of late the discussion has been warmly taken up in Calcutta, Madras, and Bombay; and only recently a valuable contribution to the problem, published in the Supplement to the British Medical Journal of October 2nd, 1909, was made before the Bombay Branch by Lieutenant-Colonel H. P. Dimmock, I.M.S., Principal of the Grant Medical College.

The recent call for suggestions by the Surgeon-General with the Government of Bombay, and the reply thereto by the Grant College Medical Society,[1] marks a further hopeful stage in the discussion, as it may indicate that the Bombay Government intends to move in the matter.

It may therefore be of interest to give a brief account of the standard and nature of the qualifications granted by the various Indian universities, and the nature of the medical curriculum.

For more than fifty years medical schools worked on English principles have been educating young Indians for the medical profession, and as a result properly qualified practitioners now abound in all populous centres. Little or no regard has hitherto been paid by the Indian Administration to the matter of official recognition of the status and claims of the medical profession, and it has been left to the profession itself to agitate in a matter which might well have interested the Government before this. Western medical methods have now taken deep root in the country, and it is earnestly to be hoped that Western medical ethics will flourish along with them. But the existence of manufactories of bogus degrees, and a decided tendency, which has been noticed by the Ethical Committee of the Association, on the part of a certain class of native practitioner to insert barefaced advertisements in native papers, and other instances of professional misconduct, show that the agitation for a General Medical Council for India comes not a day too soon. Unless the profession is to be allowed to sink to a deplorable level, it must itself keep the agitation going until a slow-moving Administration condescends to a consideration of the problem.

There are important medical schools in Calcutta, Lahore, Madras, and Bombay, which confer various diplomas and degrees on men desirous of entering civil practice. As indications of the nature of the degrees and the course of study, we may follow the *Calendars* of the Universities of Madras and Bombay.

The former university confers the degrees of M.B., C.M., and a Licence in Medicine and Surgery, with a shorter course and of a slightly lower standard. In the L.M. and S. course there is, after two years, an examination in anatomy, physiology, chemistry, with practical work (no zoology or physics). At the end of the third year a further examination in pathology, bacteriology, materia medica, and hygiene; and at the end of the fourth year in all the remaining subjects of the curriculum.

[1] British Medical Journal, December 11th, 1909, p. 1713.

For the M.B., C.M. degree the course is five years, and four examinations must be passed. At the end of the first year the subjects taken are inorganic chemistry, physics, zoology, and botany, with practical tests in all. At the end of the second year the students take anatomy, physiology, and organic chemistry, practical work in each subject being emphasized. At the end of the third year an examination is held in pathology and bacteriology, materia medica and therapeutics, practical pharmacy and hygiene. The final examination is taken at the end of the fifth year in the remaining subjects of the curriculum. Candidates who do not quite come up to the M.B. standard are awarded the L.M. and S.

The university grants its M.D. degree by thesis, with an oral examination on the selected subject; it can be obtained three years, or in the cases of arts graduates two years, after the M.B., C.M.

At the Bombay University the L.M. and S. diploma is granted practically on the same lines as at the Madras University, but with a five years' course, though the subjects of bacteriology and mental disease are not called for. As the Government of Bombay appears to be contemplating a diploma outside the university, the L.M. and S. is likely to be done away with.

The M.B., B.S. Bombay, recently instituted, demands a higher standard in the first arts examination than the matriculation. It is obtainable after a five years' course and three examinations—namely, the preliminary scientific, the intermediate, and the final. The last may be taken in two parts. The curriculum has been carefully thought out, and the syllabus of the preliminary scientific examination is commendable in all respects.

The degree of M.D. is given by examination in three separate branches—medicine and pathology, midwifery and gynaecology, and State medicine. There have been so far only seven successful candidates for this degree in the history of the university. There is also an M.S. degree in surgery and surgical anatomy, but no names are to be found in the Calendar under this head.

Apart from the ordinary medical practitioners there are other grades of qualifications which would have to be considered in a Registration Act. These are the assistant surgeons of the Indian Subordinate Medical Department and the hospital assistant class. The former are trained at Government medical schools for the subordinate medical care of European troops, have no connexion with a university or diploma-giving board, but are gazetted in the military list according to their appointments and promotion. The course of instruction they follow is of four years' duration, and the qualifying examinations comparatively easy.

The hospital assistants are trained at the smaller medical schools scattered about the Mofussil. For instance, in the Bombay Presidency there are such schools at Ahmedabad, Poona, and Hyderabad. Here youths, often of a class somewhat different from those who can afford the expense of the ordinary medical education, are trained for the native civil hospitals and the hospitals for the native troops. The course was formerly of three but now is of four years.

Again, there are medical schools (training for the same object—namely, the medical service of the State) in native States, some with a decidedly lower standard than that which obtains in the minor schools of British India.

Then we come to medical schools run by collections of individuals without any official countenance or control, and granting their diplomas to individuals who practise unquestioned as duly qualified men.

Finally, we have the practitioners of the ancient Hindu system, who work for the most part, but not entirely, among the very poor and ignorant, in accordance with their own methods of "learning."

All these facts peculiar to the country introduce difficulties in the problem of medical registration. The matter, however, has now become one of great importance, and it is to be hoped that the profession in India will not allow the Government to drop the matter as too difficult of solution.

Correspondence.

THE REPORTS OF THE POOR LAW COMMISSIONERS.

SIR,—Some time ago I received a letter from Mrs. Sidney Webb, enclosing a pamphlet about "The Breaking Up ot the Poor Law," and asking for my criticisms and suggestions.

In answer to it I wrote the enclosed reply, to which I have received no acknowledgement.

As I think the points in my reply are worthy of consideration by my professional colleagues, I venture to ask you to insert it in the JOURNAL.—I am, etc.,

"THREATENED MEN LIVE LONG."

September 29th, 1909.

Dear Madam,

You were good enough to send me your paper on the Poor Law medical officer and to ask for criticisms and suggestions. First, I should like to say that I believe the proposals of the Majority Report to be quite impracticable, owing to the growing objection of the medical profession to contract practice, which the Majority Report proposes to largely extend. My experience is that the very people who ought to join Clubs and Dispensaries do not do so; the man will join a Friendly Society, but he seldom puts his wife and family in a Dispensary, and prefers to trust to luck or charity in case they are ill. Moreover, in agricultural districts such as this there is a question in my mind whether they can really afford to pay, out of a wage of 14s. to 16s. a week, even as small a sum as a penny a week for each member of the family. At all events, I have offered on many occasions to take families in my club, and yet they do not join.

A point which you take too much for granted is the amount of dissatisfaction at present conditions. I imagine those who gave evidence were the ones who held posts that are badly paid—those who are satisfied keeping a discreet silence! For example, I hold an appointment as District Medical Officer, for which I receive £130 a year, and I am quite contented. My predecessor held the appointment for over forty years, and now gets a superannuation allowance of £85 a year. He also is quite contented. The wretched state of the medical profession as to overcrowding, and the consequent competition, leads to medical men accepting salaries that are quite inadequate. They cannot afford to lose even this small amount.

In the Minority Report I thoroughly approve of the fusion of the Guardians and the Sanitary Authority—in fact, in this district they are the same men who sit firstly as Guardians, and then as Sanitary Authority—the Rural District Council. But why make it a County medical service? Why cannot you utilize the present Sanitary districts? The County is too big an unit, and many men cannot get away from their business to get to the county town to the meetings. The result will be that the whole affair will be in the hands of a leisured class governed by officials. The men who know most about the poor will be left out.

Another point where I think you are in error is as to the practicability of the District Medical Officer of the future being a whole-timer, and with his "county motor car" being able to attend the patients over a wide area. I am certain you are mistaken in thinking the motor car able to cover such wide areas as would be necessary if he (the District Medical Officer) were a whole-timer. I have been a motorist for the past six or seven years, and I am deeply struck by the nerve strain involved in continuously driving a motor; and I am certain that no medical man who has to treat a number of bad cases ought to have a radius of more than seven miles to attend to. Of course, if he had a 20 h.p. and a driver it might be different, but look at the cost! Therefore I do not believe in the "whole-time" District Medical Officer. All District Medical Officers should be private practitioners as well.

Another point is with regard to the rearrangement of districts as they become vacant. Please remember that a Parish appointment is a valuable asset in the sale of a practice. For instance, when I came here three years ago I bought the practice at so many years' purchase; in the takings of the practice the Parish appointment was included. Suppose I wish to retire, am I to have no compensation if the appointment is abolished or merged into some other district?

Another point—Do you think it is good for a medical man to be doomed to attend all his professional life one particular class of patient; viz., the very poor? I do not. One or the most attractive features in inducing a man to take up practice in the country is that he makes a large circle of friends among his patients. If he only attends poor patients, this will be impossible. Also in many districts it would be impossible to make a living out of private practice alone. It will be very hard on people who live in sparsely populated districts if they have to send long distances for the private practitioner.

I can also see a difficulty in store for those who have the selection of the candidates for the higher posts. If there is one thing a medical man objects to, it is for any person to interfere with his patients. If certain men are to be selected and promoted over others, there will be endless dissatisfaction. All country practitioners think themselves as good, or a little better, than their neighbours. If one is selected the others will be

dissatisfied, and resignations will be frequent. It is quite a different thing from selecting a man for a post as Medical Officer of Health, for instance, where special experience and special training is required.

There is an important question involved in the transference of the functions of the board of Guardians to the Town Council. Even at the present time medical men are shut out from many public offices owing to the fact they cannot receive fees from any body of which they are a member. For instance, I cannot belong to the Board of Guardians owing to my holding the Parish appointment; and if medical relief is taken over by the Town Council I shall be shut out from that.

With these remarks, thanking you for giving me the opportunity,

Believe me,
Yours very truly,
———.

Sir,—In the Journal of December 4th I notice two criticisms of the "Minority Report" which appear to be misleading:

1. The writer of the article "Notes on Books," in describing the "Case Paper System," published by P. S. King and Son, states (page 1620):

The Majority Commissioners have specially recommended the system, but the Minority do not notice it, for such a system could only work under a Destitution Authority. If the whole of the class needing Poor Law assistance were to be broken up and distributed among various bodies, according to their requirements, such a record would lose its value.

2. On page 1630 the writer of the article on the Report of the Poor Law Commission for Scotland states:

While dissenting from the findings and recommendations of the Majority Report, the Minority do not formulate any scheme to deal with the evident overlapping of charities.

The following are extracts from the cheap edition of the Minority Report published by the Fabian Society:

Some systematic co-ordination within each local area, of all forms of Public Assistance, and, if possible, of all assistance dispensed by voluntary agencies, is essential, if we are to put an end to the present demoralization.

We propose that these officers, who might be designated Registars of Public Assistance, should have a threefold duty. They should be responsible for keeping a register, with "case papers" of the most approved pattern, of all persons receiving any form of Public Assistance within their districts, including treatment in any public institution.

We should earnestly invite all voluntary hospitals, dispensaries, and other institutions regularly to send in similar information. In course of time, we should hope to get recorded in this register the persons assisted by every public or private agency within its district. The registrar would thus be able to see, at once, whether different members of the same family were receiving assistance without this being known, or whether different authorities, in ignorance of each other's doings, were simultaneously aiding the same person. In this branch of his duty, he would confine himself to communicating the information to the various local authorities, to the registrars of other districts where necessary, and to such voluntary organizations as had affiliated themselves.

These extracts appear directly to contradict the statement made by the writers of the articles referred to.—I am, etc.,

Sheffield, Dec. 8th. H. Scurfield.

*** The review applied, as was stated, to a particular *History Sheet or Case Paper System* commended in the Majority Report, part iv, chap. 6, sections 299, 300. It is true that in chap. 12 (B), (iii) and (*a*), of the Minority Report, from which the first two quotations made by Dr. Scurfield are taken, reference is made to "case papers of the most approved pattern," but no indication is given as to what these "case papers" may be, and there did not seem to be grounds for assuming them to be identical with those which were being reviewed. It seems, indeed, hardly likely that case papers specially introduced for use under the present Poor Law system, the main object of which is to keep all kinds of public relief given to members of one family on a special paper—treating the family as the unit for public assistance, all being under a single body—would lend itself to the needs of a system which broke up the present Poor Law, and instead of treating the family as the unit divided it up according to the kind of relief needed, sending, it might be, certain of the members of the same family to four distinct though co-ordinated bodies to be relieved.

The third quotation which Dr. Scurfield makes is from the Minority Report on England—Chapter XII (B) (iii) (*b*), whereas the article on page 1630 was concerned exclusively with Scotland. Observations and recommendations in the report on England cannot be applied to Scotland, as, indeed, the Minority appear fully to recognize. The following passages are reproduced from the Minority Report, Scotland (*f*): "The Establishment of a Common Register for all Forms of Public Assistance and of a Public Registrar."

We therefore recommend that there should be established in each burgh and county one or more officers, to be designated Registrars of Public Assistance, to be appointed by the council of the burgh or county, and to be charged with the threefold duty of:

1. Keeping a common register of all cases in receipt of public assistance;
2. Assessing and recovering, according to the law of the land and the evidence as to sufficiency of ability to pay, whatever charges Parliament may decide to make for particular kinds of relief or treatment; and
3. Having brought before him, for record and (to prevent overlapping) sanction, all the grants of home aliment proposed by the committees concerned with the treatment of the several cases.

It would, of course, be necessary for the Registrar of Public Assistance to have under his direction (and under the control of the General Purposes or Finance Committee of the County or Town Council) the necessary staff of inquiry and recovery officers, and a local receiving house for the strictly temporary accommodation of any persons who might, as "missed cases," be found in need, and not as yet dealt with by the committees concerned. In no case, however, would any but strictly temporary assistance, pending allocation to the appropriate treating authority, be thus given. The great majority of the persons needing public assistance would apply directly to, or would be discovered by, the officers of the particular authorities concerned with their particular needs, and those requiring institutional treatment would, in this way, for the most part be admitted directly into the institutions of the Local Education Authority, the Local Health Authority, the Lunacy Authority, or the Authority for the Unemployed Able-bodied, which would have their own probation wards. The local receiving house, or set of rooms, under the control of the Registrar would, therefore, mostly stand empty, available merely for exceptional and emergency cases.

The only reference to the volunteer work amongst the poor is, we believe, in (*g*), "The Enlargement of the Sphere of Charitable Effort and Volunteer Work among the Poor":

We have not been unmindful, in our scheme of reform, of the inevitable limitations and shortcomings of all merely official machinery; or of the great advantages to be gained from utilizing the services of those charitable volunteers who already do such splendid work in alleviating the sufferings of the poor. We regard it as a great advantage of our proposals that they will not only leave place for this voluntary charitable work, but also ensure it an enlarged sphere, of even greater importance than at present. Nor do we here allude only to the numerous private institutions, which are administered by unofficial committees and maintained by voluntary subscriptions. Of these religious and philanthropic institutions—whether orphanages or infant asylums, maternity or rescue homes, training establishments of various kinds, general or special hospitals, residential schools for boys and girls of particular denominations or particular needs, homes for the mentally defective or the physically incapacitated, or asylums for the aged—we hope that the fullest possible use will be made by all public authorities, subject to proper inspection, and, if desired, reasonable payment. . . . We therefore strongly recommend to the active leaders of philanthropy in each burgh and county the desirability of taking steps to draw together the various charitable agencies and voluntary workers in their district, into an organization on the lines of the guilds of help or councils of social welfare that have been successfully established in some towns. Such an organization might usefully include, in a federal union for mutual assistance, any local health societies, children's care, or apprenticeship associations; fresh air funds or country holiday societies; the local charitable almshouses, hospitals, infirmaries, or convalescent homes; such orphanages, industrial schools, and such institutions for the physically or mentally defective as are available; the charitable agencies connected with the various churches; any systematic visitors or workers among the poor; and, in fact, all the benevolent agencies in the locality concerned with those in need or in distress. . . . But we wish emphatically to record our dissent from the recommendations of the Majority Report with regard to what is termed a Voluntary Aid Council and Voluntary Aid Committees. . . . We regard the setting up, all over Scotland, of a new and additional relief agency, not only as generally impracticable, but even where it may be practicable, as in itself demoralizing and wasteful. We see no reason to suppose that the existing organized charities, or the various churches, or benevolent individuals, are likely to be willing to subordinate their own efforts in charitable work, or even to communicate their intentions, to what will necessarily be (seeing that its principle function is to dispense relief) a rival charitable agency, any more than they have so far been willing to do this for the Charitable Organization Society. It would, we think, be out of the question to give to a non-elective and irresponsible body,

such as is proposed, any coercive or regulative powers over other charitable agencies, which could not even be required to communicate to it their proceedings. . . . The proper sphere of voluntary work is, in our judgement, the supplementing of the visiting and the provision made by the various public authorities. We utterly object to this voluntary charity being compulsorily forced on the poor in any one case as a substitute for the public provision.

THE RELATIONS OF THE LAITY AND THE MEDICAL PROFESSION.

SIR,—What your clever correspondent, Mrs. Hodgkinson, evidently requires is a new kind of medical practitioner, who shall possess two characteristics in combination.

1. He must be prepared, when consulted by a patient, to make not only such investigations as he may deem necessary to elucidate the case, but as many others as possible—the more, and the more elaborate, the better—so as thoroughly to impress his client. He must also be prepared to discuss with his patient:

(*a*) The case in detail.
(*b*) All recent writings which may be supposed (by the patient) to have any bearing on it.
(*c*) All the works on diet and hygiene in general with which the patient may be familiar, or, perhaps it would be better to say, slightly acquainted.

He should not do this hurriedly, but should give his patient plenty of time to display the extent and variety of her reading in this connexion, and to make any valuable suggestions which may occur to her. In other words, he must be prepared to treat the patient in consultation with herself.

2. He must only charge a small fee.

I do not think Mrs. Hodgkinson is likely to get what she wants—that is, to find any one who will satisfy both these requirements at once. Most medical men can find work more useful to the community and better paid. But if she is prepared to drop her second requirement and pay an adequate fee I think she may succeed even now. She need only look around her and use a little discrimination. As a help I may tell her that the names of all suitable men begin with Q. I think, perhaps, that homœopathic practitioners as a rule are prepared to adapt their ways to the class of patients on whose behalf Mrs. Hodgkinson pleads more readily than the ordinary practitioner.—I am, etc.,

Liscard, Dec. 13th. J. A. SANDERSON.

POOR LAW AND VACCINATION APPOINTMENTS

SIR,—In the careful report of Adams *v.* Pomeroy in your last issue, I note that particular attention was given to a statement in a paper read by me at Hull in 1908; and in his evidence Dr. Whitaker appears to throw doubt on the accuracy of the statement that many Poor Law appointments throughout the country would be resigned to-morrow were it not for the fees received by the holders as public vaccinators. As the frequent misuse of the emoluments of the public vaccinator by many boards of guardians to compensate the underpaid district medical officer constitutes a well-recognized grievance, it might be well to put forward the evidence on which my statement was made, and to submit it to the criticism of Dr. Whitaker and others who doubt its accuracy.

In most cases, at all events in rural districts, if a district medical officer, who is also public vaccinator, resigns his Poor Law appointment, he is certain to be made to resign his vaccination, however much he may desire to retain it. Why do the guardians require this resignation of their retiring medical officer? Are they actuated by personal resentment against him for having given up a well-paid post they desired him to hold at all hazards? Or is it because they know that unless they can give the vaccination post as a bribe, they will be unable to find a successor? When such experience as this is constantly being met with, is it unreasonable to assume that these underpaid Poor Law appointments would be much more frequently resigned were it not for the vaccination fees? In further confirmation I may say that I know of some cases where the public vaccinator has been permitted to retain office after giving up his Poor Law appointment; but in these cases the latter has always been fairly well paid, so that no difficulty would be likely to arise in filling it up. I also have met with one case where the fees of a public vaccinator were likely to be reduced by a proposed change in his district, and his board offered to make this up by increasing his Poor Law salary. On carefully considering all the facts, I think there is plenty of evidence to prove the almost certain truth of my contention.—I am, etc.,

London, E.C., Dec. 11th. MAJOR GREENWOOD.

PULMONARY TUBERCULOSIS TREATED BY CONTINUOUS ANTISEPTIC INHALATION.

SIR,—Dr. Lees has not been precipitate in publishing his results of the continuous inhalation treatment of phthisis; their number also will doubtless lead to a still more extended trial by others; my own more limited experience leads me strongly to endorse Dr. Lees's enthusiasm. My attention was drawn to it by Dr. Lees's valedictory lecture at St. Mary's, delivered May 29th, 1907. Even in far advanced cases I have found there has been a decrease in fever and some slight improvement, so that mothers have been able to do household work, wearing the mask, when otherwise they would have been in bed, and there has been the comforting feeling that at least something additional has been done to prevent infection of others. In some of my cases no bacilli were found, but the anaemia, coupled with cough and definite signs at an apex, made one confident of a diagnosis of incipient phthisis. A short stay in hospital, with continuous inhalation, followed by a modified treatment at home, has always produced such surprising cures that, were it not for similar results in cases where tubercle bacilli have been found, I should hesitate to trust my original diagnosis.

Case 21 of Dr. Lees's is perhaps the most striking. Here tubercle bacilli were found in large numbers in March, and the patient seemed to be going down hill with a recrudescence of an old focus. He has steadily improved so that now, nine months afterwards, he weighs 29 lb. more, has lost his cough, his tubercle bacilli, and his expectoration in a great measure. He still inhales for five hours during the day and all night at his own wish. In addition, he has only been away from his work as a clerk for about a month. In such a case we can be sure, as far as we can ever be sure of anything, that the result is due to the treatment alone.

Dr. Lees, it seems to me, might have dwelt more on this point—that under his treatment patients are not kept long from work, can earn their livelihood without long lazy months, producing slackness and weariness, and the moral effect of this alone is a great gain.

The mask and inhalation are not unpleasant, and only in one instance have I had difficulty in persuading a patient to undergo the treatment. There is danger in not continuing long enough when the early result of treatment is so apparent.—I am, etc.,

St. Ives, Huntingdonshire, Dec. 13th. W. R. GROVE.

TUBERCULOSIS IN CHILDREN AND SCHOOL INSPECTION.

SIR,—I am thoroughly in accord with Dr. Allan's statement as to the difficulty of diagnosing pulmonary tuberculosis in the course of the routine medical inspection of school children. Even in the case of adults, and with plenty of time for investigation, a diagnosis is often of extreme difficulty without recourse to bacteriology or other confirmatory tests. And is trebly so in a school child during medical inspection; for on all sides you are subjected to restrictions; information is absent or of doubtful utility; time is very limited; the area of chest available for investigation rarely exceeds a square foot; and, lastly, the patient is excited and restless. Therefore, how to satisfy oneself in those cases sufficiently to make a written diagnosis has been exercising my mind for some months past. All the more so that an article appeared in the BRITISH MEDICAL JOURNAL in the commencement of the present year, from which the element of doubt seemed to have been eliminated, and fixing the incidence of tuberculosis among school children in the area under observation as somewhere about 15 per cent. Up to the present my percentage of definitely diagnosed pulmonary tubercle does not exceed 1.5 per cent., or one-tenth of the figure previously mentioned; and the difference can only be explained by a vastly dissimilar standard as to what is

considered essential to a definite diagnosis. Of course there are from 5 to 10 per cent. of what may be called borderland cases, classed variously as "constitutionally delicate," "physiologically delicate," "weak-chested," "pretuberculous," etc. And of these, possibly the majority are tuberculous. That, however, is merely a pious opinion, and I personally see no way of confirming or refuting it with the means and time at the disposal of a school medical inspector.

Discrepancies such as the foregoing emphasize the necessity for the fixation of definite standards to apply generally to medical inspection. The figures at present being worked out at such cost are, from a statistical standpoint, comparatively worthless or actually deceptive. Every one concerned takes it upon himself to fix his own standard, and the resulting figures are consequently good for his own domain and no further. Therefore the urgent need for a conference of all concerned in school medical inspection, if for nothing else than to arrange a scheme of standardization. Meanwhile, one can do no more than follow one's own scheme, and trust that

somehow good
Will be the final end of all.

—I am, etc,

Merthyr Tydfil, Dec. 13th. S. B. WALSH, M.D., D.P.H.

PROPOSED LEGISLATION ON ANAESTHETICS.

SIR,—Among the conclusions which the Anaesthetic Committee of the General Medical Council recommend to be transmitted to the Lord President of the Privy Council is one which it seems to me will press hardly upon those of us whose practice lies among the working classes, and possibly still more so upon our patients. I refer to Recommendation 7, printed on page 361 of the SUPPLEMENT to the JOURNAL of December 4th.

To take my own case. As a house-surgeon I administered some 2,000 anaesthetics, and since being in practice on my own account I have frequently in the case of poor patients given an anaesthetic and myself performed small operations, often procedures of little more than momentary duration—such as opening and inserting a tube in a deep mammary abscess, slitting up the constricting band of a bad paraphimosis, or applying the actual cautery to a superficial naevus. In all these cases the patient or parent has been willing and anxious to pay me a small fee for doing what was necessary, but the expense of calling in a special anaesthetist as well would have meant to them parting with the whole or major part of another week's wages—no inconsiderable matter, unless really necessary. In acting thus I have never felt that I was doing wrong or running such terrible risk as to call for my action being forbidden by law.

Again, in midwifery cases, are we to be debarred from giving the patient a few whiffs of chloroform while the head is passing the vulvae, or getting her lightly under while applying the forceps in a simple case, except another practitioner is present?

Of course, we are all aware that the ideal thing is to have a special anaesthetist present, and where expense is no object, one would insist upon it; but it seems to me that such cases as I have mentioned can quite well be dealt with by one man, and that the necessity for the presence of a second one might well be left to the judgement of the practitioner in charge.—I am, etc.,

Burton-on-Trent, Dec. 13th. J. H. JOYCE.

ARE WE UP-TO-DATE?

SIR,—Every day sees some addition to our medical or surgical knowledge, hour by hour fresh improvements are made, new ground opened up, and the motto of the profession should always be "Upward and Onward," but, still, sometimes it is well to pause awhile and look backward, or, perhaps, one might say, sideways. Some years ago the fresh air treatment came into vogue. It was a great idea. The profession seized upon it, turned it to account, and to-day we see and reap the benefits of this advance; and yet, had we looked backward and taken our view in Africa, we should have seen the Kaffirs for centuries past taking their sick to the mountains for fresh air treatment. We must not forget that it is only in recent years the need of oxygen and its benefits for the nervous system has been recognized, and lunatics are now kept in bed in the open air much to their benefit, and yet the unthinking (?) savage of Africa has known the benefit of fresh air for ages.

So it is with the so-much talked of massolettes and lactic acid treatment which is brought before us as something new, and which will, no doubt, benefit us in many ways. For example, it will reduce the number of cases of appendicitis by dealing with the bacilli and cocci, which causes in many—if not in all—cases this disease. And yet, again, the Kaffirs have treated their sick with sour milk for ages.

I am of opinion that many useful medical remedies might be obtained from the native races of the earth. We obtained our knowledge of quinine in an historic manner from the natives of India, and I understand the North American Indians have an antidote for snake poison. Probably every native race has made some or other medical discovery, and it seems a pity that methods of treatment by native races are not studied more. It is just possible a universal inquiry might bring to light some most valuable information. For all we know, there may be a cure for cancer somewhere in use. The natives might be using a remedy for swellings or tumours without the slightest idea they were treating cancer. I think we are too apt to treat the native medicines with contempt, and so may be overlooking some valuable remedies. If one of our multi-millionaires would engage two physicians and two surgeons, and send them on a roving commission round the world to inquire into native treatment and native remedies, I am absolutely convinced they would return with a whole fund of valuable information. It stands to sense that the natives of every country have made from time to time medical discoveries, and we certainly do not know them; and I doubt whether any great effort has ever been made to find them out. It was from the natives we heard of erythroxylum coca, and yet, in European scientists' hands, what have we not done with the leaves of this tree, the knowledge of which would never have been known to us had it not been for the discovery by the natives of Bolivia and Peru of its valuable properties in sustaining the strength on long journeys.

The Chinese have a number of absurd remedies, but amongst them must surely be something useful, and so it must be with the other Asiatic races. I am convinced there is much medical knowledge amongst the native races of the globe which has not yet been communicated to the European medical profession.—I am, etc.

Leytonstone, N.E., Nov. 19th. ARTHUR TODD-WHITE.

*** It is perhaps desirable to point out that, so far as the British Empire is concerned, some provision for the investigation of medicinal products from tropical and sub-tropical sources does exist. Such investigations are undertaken at the Imperial Institute, South Kensington, at the request, or with the concurrence, of the governments of the colonies or protectorates concerned.

THE EDUCATION OF DENTAL SURGEONS.

SIR,—The practice of dentistry calls for mechanical skill far greater than is demanded in any other department of surgery; and unless a dentist be before all things a good mechanic he cannot succeed in his profession. Mechanical training cannot be begun too early. It is a great advantage to a lad if the training can be commenced at school. "Cabinet making" and metal working provide finger training, and give deftness in the use of tools. The dental curriculum demands two years' instruction in mechanical dentistry. Before entering upon this it will have been possible to decide whether the tiro possesses the necessary aptitude; without this it will be wise to seek another vocation. Nothing could be better fitted to prepare the student for the work of operation upon the teeth than pupilage in mechanical dentistry. After this he enters upon the surgical part of his education in the dental hospital with fingers so trained that the simple operations appear easy to him; he has already carried out closely similar procedures at the workbench, and has acquired the mastery of tools, and the facility and sureness of touch which early mechanical training rarely fails to produce. Proceeding by gradual steps from operations on extracted teeth fixed in a vice—by which means many processes of "stopping" can be practised—to simple operations on the living subject, the student can be led thus into the practice of

dentistry, until at the end of his career he is turned out an accomplished practitioner. The scientific part of the education for the dental diploma provides ample teaching in the principles and practice of general and special surgery.

Higher medical and surgical degrees have certain advantages, but they cannot make their holders better dentists or provide any substitute for the indispensable skill of the accomplished handicraftsman. In some few cases a man may be found who can train himself as a mechanic after 25, the age when a full medical qualification has been obtained; but if dentistry be chosen as a profession, the only safe way in the vast majority of cases is to follow the curriculum for the dental diploma and leave higher qualifications for secondary consideration.—I am, etc.,

Redhill, Dec. 7th. HENRY SEWILL.

PRESCRIBER AND DISPENSER.

SIR,—As a practitioner dispensing his own medicines, may I point out the fact that under this system my patients are seen by me at frequent intervals, and that I am able to follow the course of the case more closely, to change the medicine in any direction I may find advantageous, and generally learn to know my patients and their diseases very intimately?

Quite apart from pecuniary considerations, which in themselves are a great obstacle, I should regret a change to the prescribing system.—I am, etc.,

London, N., Dec. 10th. A. F. SHOYER, M.D.

THE LISTER INSTITUTE OF PREVENTIVE MEDICINE.

SIR,—The governing body of the Lister Institute have noticed with much annoyance that a description with photographs of the Institute has appeared in an advertising pamphlet entitled "The Petroleum Idea," issued by the Angier Chemical Company, Limited. As the appearance of this description has occasioned some surprise and perplexity amongst the members of the profession to whose notice it has come, the governing body would be grateful if you could find space for the enclosed letter of apology from the World's Graphic Press to the Institute's solicitors, which sufficiently explains the circumstances.—I am, etc.,

CHARLES J. MARTIN,
Director.

[COPY.]

World's Graphic Press, Limited.
36-38, Whitefriars Street, Fleet Street,
London, E.C.
November 26th, 1909.

Messrs. Hunter and Haynes,
9, New Square,
Lincoln's Inn.

Dear Sirs,—We are in receipt of your letter of the 19th instant with regard to the photos of the Lister Institute.

We are very sorry if we have indirectly caused annoyance to your client who kindly gave us the opportunity of taking the photos of the institute. We have not seen the pamphlet to which you refer, for it was not published by us, but we understand that the photos used therein are photos which we supplied to a firm who asked for them.

We stated at the time the permission was granted to us that we required the photos for publication in the *Scientific American*.

Please accept our sincere apology for the annoyance we have caused your client by supplying the photos to the firm in question. We undertake not to use or supply the said photographs to any journal or person without, in every case, previously obtaining the consent of the Lister Institute.

Yours faithfully,
WORLD'S GRAPHIC PRESS, LIMITED.
Sgn. J. Savory, Secretary.

A PORTABLE OXYGEN GENERATOR AND INHALER.

SIR,—In answer to the kind appreciation of my apparatus by Dr. G. A. H. Barton, I would say that there is not the smallest danger from the heat developed, even if the generation is carried out in a room where ether vapour is present and the cooling is inefficiently done. The mouthpiece of the apparatus can be adjusted easily to an ordinary facepiece, and the apparatus no doubt could be used for giving oxygen with nitrous oxide, or chloroform if the chloroform vapour were pumped into the facepiece. An assistant could gently shake the caustic soda solution round the bottom of the bag so as to absorb the exhaled carbon dioxide.—I am, etc.,

London Hospital Medical College, Dec. 17th. LEONARD HILL.

MR. POMEROY ON VACCINATION.

SIR,—In your issue of December 11th you make certain comments about myself, which are, I daresay, justifiable from your point of view, and I only wish to take exception to one.

But first let me say that when I allude to doctors as fee-hunters it is not mere abuse, but my firm conviction as regards the vast majority. If not, how do you account for these three items: (*a*) During 1908 the vaccination fees were reduced at Birmingham, and the day before the new and lower scale came into practice the public vaccinators were going round and vaccinating babies of one or two days old. The medical journals did not protest. Was that done for love of vaccination, for love of children, or for love of fees? (*b*) Medical statistics. Take the last report of the Metropolitan Asylums Board on the small-pox outbreak, 1901–2. The cases are returned as vaccinated, unvaccinated, and doubtful. In vaccinated cases the deaths are 9 per cent.; in unvaccinated, 31 per cent.; in doubtful, 51 per cent. These figures, if accurate, show it to be more dangerous to be doubtful than unvaccinated. If you add the whole lot together, the mortality comes out at 16·82 per cent., which is about the same figure as before vaccination was heard of. Are these figures compiled for truth, for humanity, or for fees? (*c*) The difficulty of obtaining a death certificate as death due to vaccination. The last bad case of this happened at Bedminster. Rosina Sandhill was vaccinated by order of Messrs. Merdon and Sons on February 13th, 1909. By February 25th she was too ill to go to work, and she expired after fearful suffering on Sunday, November 14th. Dr. Bullen, who attended her pretty constantly throughout, said to her on one of his visits, "You were a bright, bonny girl, Rosie, before you were vaccinated." A *post-mortem* examination was held by Drs. Walker Hall and Bullen, at which Dr. Creighton and Dr. Hadwen attended. The two last were satisfied that the cause of death was a malignant disease—cancer—in the pelvis. The inquest was held on Wednesday, and the verdict, on the evidence of Dr. Hall Walker, was "Tubercle of many years' standing." Why was not vaccination even mentioned? Truth? the mother's feelings? or future vaccination fees?

Finally, now as to myself. You state "his notions of honour are shown by his statements in the witness box, and nothing further need be said on that subject." Your meaning is clear; but even taking that difficult position—that is, defendant in the witness box—your view is not the only one possible. What are the facts? I write a strong article, which I could easily have got out of by paying something down; but my ideas of honour make me stand by anything I sign my name to. The judge (Sir W. Grantham), in summing up, asks the jury to give "such damages as would enable her to hold up her head in an honourable profession." Yet after those words, and after the jury had seen "such a fellow" (your words of myself) and his "notions of honour" in the witness box and noted all the failings you attribute to me, they gave the woman one farthing to enable her to hold up her head, as Sir W. Grantham invited. I take it this shows their view was not yours.—I am, etc.,

London, W., Dec. 14th. ERNEST POMEROY.

⁂ Mr. Pomeroy's letter reaches us just as we are going to press, and we have therefore no opportunity of verifying his statements. And, to speak frankly, we are not prepared to accept any statement of his on vaccination or the medical profession without the fullest proof. We do not impugn his veracity—although in open court he avowed his belief that "it is a great mistake to suppose there is any merit in being truthful always"—but he is evidently strongly biassed on the subjects referred to, and we question both his information on matters of fact and his judgement in regard to them. Subject to further inquiry, we may deal with the points he makes: (*a*) Even assuming that the public vaccinators did go round as he alleges, he does not attempt to show that any harm resulted to the children. If the vaccinators wished to be paid on the higher scale, we reply that the labourer was worthy of his hire. The motto of the illustrious family to which Mr. Pomeroy belongs is, we believe, *Virtutis fortuna comes*, and would not be appropriate to the medical profession, whose virtue is to a large extent its own

reward. (*b*) Again assuming Mr. Pomeroy's statements as to the mortality in the small-pox outbreak of 1901–2 to be correct, his estimate that 16.82 per cent. is about the same as the death-rate from the disease before vaccination was heard of, is sufficient to show that he has not taken the trouble to learn the elements of the subject. In England alone the bills of mortality show that during the years between 1667 and 1722 the average number of deaths from small-pox was 72 per 1,000 of the total number of deaths from all causes. It has been calculated that the death-rate from small-pox in England during the last half of the eighteenth century was such that if applied to the present population it would give an average of 70,000 deaths a year. In pre-vaccination days it was estimated that two-thirds of all the children born were attacked. Before the introduction of vaccination, one-half to three-fifths of the total mortality among children was in some years due to small-pox. What has never been estimated is how much in the way of fees the medical profession has lost by the introduction of vaccination. Perhaps Mr. Pomeroy will look into that question; the results might perhaps enlighten him. (*c*) As regards his Bedminster case, we should like to have the statements of the doctors; we should also be glad if Mr. Pomeroy would take the trouble to make up his mind whether it is Dr. Walker Hall or Dr. Hall Walker to whom he refers. But assuming that the opinion of Dr. Creighton and Dr. Hadwen was correct, will Mr. Pomeroy tell us what relation there could be between cancer in the pelvis and vaccination? Lastly, Mr. Pomeroy shows the graceful courtesy of his nature and the manliness (*virtus*) of his motto by the manner in which he refers to Miss Martha Adams. On this we need not comment; his noble qualities speak for themselves. We need only add that it was a part of his *fortuna* that he got a jury of the same degree of intelligence as himself. But no jury's verdict can obliterate the effect of the evidence given by this "honourable" and fortunate gentleman.

Universities and Colleges.

UNIVERSITY OF OXFORD.

THE following candidates have been approved at the examinations undernoted:

FIRST B.M. EXAMINATION.—*Organic Chemistry:* H. E. A. Boldero, C. H. Carlton, F. B. Chavasse, W. T. Collier, L. M. Davis, J. C. Dixey, K. M. Dyott, V. T. Ellwood, L. Gameson, O. H Gotch, W. J. Hart, J. W. Horan, M. R. Lawrence, P. A. Martin. T. S. Nelson, A. L. Pearce-Gould, E. Scott, G P. Selby, N. A. Sprott, C. P. Symonds.

Human Anatomy and Physiology: W. H. Bleadon, A. Booth, A. Jackson, E. E. Mather, H. G. Morris, H. M. Pope, M. O. Raven, J. Sainsbury.

FINAL B.M.—*Pathology:* G. E. Downs, A. D. Gardner, G. W. Johnson, C. Newcourt, E. L. Pearce-Gould, A. F. Sladden.

Forensic Medicine and Public Health: R. F. Bridges, G. H. Hunt, S. F. Moore, H. P. Newsholme.

Medicine, Surgery, and Midwifery: F. J. Aldridge, Magdalen; H. G. Butterfield, Wadham; G. H. Cross, Balliol; D. C. Dobell, Christ Church; G. J. Z. Jessell, Univ. Coll.; S. F. Moore, Trinity; C. Newcourt, St. John's; H. P. Newsholme, Balliol.

UNIVERSITY OF CAMBRIDGE.

Degrees.

THE following degrees have been conferred:

M.D.—O. May, St. John's; S. J. Steward, Downing.
M.B.—K. A. Lees, King's; B. Day, Caius; H. B Elton, Caius.
B.C.—K. A. Lees, King's; B. Day, Caius; G. A. F. Heyworth, Trinity.

Appointment.

Mr. J. E. Purvis, M.A., St. John's College, has been appointed University Lecturer in Chemistry and Physics in their application to Hygiene and Preventive Medicine.

NATIONAL UNIVERSITY OF IRELAND.

THE President of the Dublin University College, Dr. Denis J. Coffey, has issued a circular giving a general scheme for scholarships and other prizes for the session 1909-10, and a scheme of fees. In the Faculty of Medicine it is proposed to give scholarships and exhibitions in each of the five years of the same value, namely:

Two scholarships of £25 each, tenable for one year.
Two exhibitions of £25.
Two exhibitions of £15.
Other prizes to amount of £20.

The scholarships will be awarded soon after the opening of the session, the exhibitions at the close of the session.

Fees: Provisional Scheme.

As the scale of fees for the various classes cannot be completed before regulations have been made in regard to the university courses in the session 1909–10, the following arrangements have been provisionally adopted by the governing body of the Faculty of Medicine:

The amount payable for attendance on the courses of instruction given in the college for the primary medical degrees of the National University of Ireland will be £14 per annum if the courses are equally distributed over a period of five years. In the ordinary distribution of the subjects for professional examinations in certain years the subjects required are greater in number than in other years, so that the fees in those years would vary accordingly.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary council was held on December 9th, Mr. Butlin, President, in the chair.

Diplomas.

Diplomas of Fellowship were issued to 28 candidates found qualified at the recent examination. Diplomas of the Licence in Dental Surgery were issued to 36 candidates.

Admission of Women to the Museum.

Certain modifications in the above regulations were adopted by the council, to the following effect:

"The museum is also open on Friday and Saturday to qualified medical women; to women medical students; to nurses; and to women obtaining orders of admission from the Secretary or Conservator.

"Women holding other medical or surgical qualifications than those of the college, and women medical students desirous of admission on other days, must make application in writing to the Secretary or Conservator. The application must be accompanied by a letter from the Dean of the applicant's medical school (in the case of a medical student), recommending that a ticket of admission be granted. Tickets of admission, which are not transferable and must be produced on application for admission, are granted for six months; at the expiration of this time application must be made for their renewal.

"On other days than Friday and Saturday women who do not hold a medical qualification or who are not medical students can only be admitted on the personal introduction of a Fellow or Member of the College, or Trustee of the Hunterian Collection, who will accompany them during their visit."

The Odontological Collection.

Mr. J. F. Colyer was appointed Honorary Curator of this collection (see JOURNAL, December 11th, p. 1686).

Recognition of Medical Schools.

The London School of Medicine for Women and the Edinburgh School of Medicine for Women were added to the list of recognized medical schools. The Royal Free Hospital was added to the list of recognized hospitals.

The Public Health Laboratories of the School of Medicine of the Royal College of Physicians and Surgeons of Edinburgh were added to the list of laboratories recognized for the course of instruction for the diploma of Public Health.

The Midwives Act.

The President called attention to the report of the Departmental Committee appointed by the Lord President of the Privy Council to consider the working of the Midwives Act, 1902. It was decided that a communication should be addressed to the Privy Council urging the need for early legislation to give effect to the recommendations of the committee.

Appointment of Examiners, etc.

Mr. Herbert F. Waterhouse was appointed a member of the Court of Examiners in the vacancy occasioned by the retirement of Mr. Bernard Pitts.

Dr. G. F. Blacker was appointed Examiner in Midwifery under the Conjoint Examining Board in the vacancy occasioned by the death of Dr. W. R. Pollock.

Mr. R. J. Godlee was appointed to represent the college in the Senate of the University of London in the vacancy occasioned by the death of Mr. H. H. Clutton.

Mr. A. P. Gould was appointed a member of the Executive Committee of the Cancer Research Fund in the vacancy occasioned by the death of Mr. H. H. Clutton.

The late Sir William Ferguson.

A cabinet for instruments used and made by the late Sir William Ferguson, Bart., was presented to the college by Mr. Bernard Pitts.

The Fellowship.

The following candidates were admitted to the Fellowship:

J. W. G. Grant, D. L. Davies, H. B. W. Smith, W. S. Edmond, W. G. Howarth, A. D. Griffith, F. R. Hotop, A. S. B. Bankart, J. E. H. Roberts, H. S. Souttar, J. P. Hedley, W. R. Bristow, R. N. Coorlawala, A. B. Rooke, A. P. Bacha, R. L. Spittel, M. D. D. Gilder, G. V. Deshmukh, W. W. Treves, J. J. Abraham, A. B. Aitken, H. G. Anderson, A. Gough, F. F. Muecke, M. L. Scott, A. Spong, H. G. Thompson, A. S. Worton.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

AT a meeting on November 11th the following gentlemen were elected to the Fellowship:

E. C. Bevers, H. H. Bywater, A. J. Evans, W. A. Fairclough, W. Girdwood, J. P. Granger, R. H. Harris, R. B. D. Hird, J. Husband, Captain, I.M.S.; A. W. B. Livesay, Staff Surgeon, R.N.; T. R. McKenna, H. J. McLean, S. W. McLellan, J. Morris, W. J. Morton, A. N. Palit, J. Raffan, J. M. Renton, J. Russell, C. P. Sapsford, C. J. Smith, G. M. Smith, J. A. M. Smith, W. Taylor, and O. H. Williams.

Obituary.

W. B. RANSOM, M.A., M.D.CAMB., B.SC.LOND., F.R.C.P.,

SENIOR PHYSICIAN TO THE NOTTINGHAM GENERAL HOSPITAL; PHYSICIAN TO THE SHERWOOD FOREST SANATORIUM FOR CONSUMPTION, ETC.

THE name of Ransom, father and son, is not only a household word in Nottingham, but is widely known in the medical world outside that city. Dr. William Bramwell Ransom, the subject of this memoir, commenced practice in the city of his birth in 1890, and shortly afterwards was appointed Physician to the Nottingham General Hospital on the resignation of his father. Only two and a half years have elapsed since Dr. W. H. Ransom, F.R.S., passed away full of years and honours, and now on December 9th his no less gifted son has been called from his unfinished work at the early age of 48, deeply mourned by a large circle of friends and patients.

Educated in the most liberal manner for the high calling he was destined to pursue, Dr. Ransom already manifested in his boyhood and as a pupil at Cheltenham College those brilliant gifts, so conspicuous in after-life, which education can foster but cannot create. From Cheltenham at the age of 17 he proceeded to his father's old school, University College, London. In 1882, being then 21, he headed the list in physiology honours at the Final B.Sc. Lond., carrying off the university scholarship and medal. He had already entered, in 1880, at Trinity College, Cambridge, and in 1883 graduated B.A., first class in the Natural Science Tripos. On account of his great interest in physiology he was sent by the University to do original work at the Zoological Station at Naples, and at a similar institution at Roscoff in Brittany. As a result of this work he published articles on The Cardiac Rhythm of Invertebrata, The Influence of Glycerine on the Liver (*Journ. Physiol.*, vols.) 5 and 7), The Spinal and Visceral Nerves of *Cyclostomata*, and on other subjects.

Photograph by] W. B. RANSOM. *[Cox, Nottingham.*

In 1886 he was elected Fellow of Trinity College, and having returned to University College to study medicine, he gained two Fellowes medals for clinical medicine, the Liston medal for pathology, and graduated M.B.Lond. in 1888. After a year's post-graduate study in London, Vienna, and Halle, he took the M.D. in 1889. In the following year he became a Member of the Royal College of Physicians. The same college recognized his eminent abilities by electing him to the Fellowship in 1898.

No sooner had Ransom settled in Nottingham than it was felt not only among the medical profession, but by every one with whom he came in contact that a new power had arisen in the place. On the boards of charities and other committees he at once showed an insight into difficult problems which astonished men of years and experience. Whenever he spoke he was attentively listened to, and his weighty words were always delivered with grace and ease of style, and not without a fund of ready humour. Under these circumstances it cannot be wondered that he speedily became the leading medical consultant in the city and county. He early recognized that purely medical practices could not be expected to be as large as formerly on account of the ever-increasing incursions of surgery; nevertheless he was always an exceedingly busy and overworked man. He was invariably kind and sympathetic to patients and courteous towards his brethren. With his infallible memory and penetrating insight the diagnosis of a difficult case appeared an instinct with him. Yet he had none of the arrogance of intellect. He must have seen something of the mistakes of others, yet he never did or said anything calculated to disturb the relations of doctor and patient. "I never wish to meet a nicer or a fairer man in consultation"—this is not a mere commonplace of the *nil nisi bonum* type, but has been said scores of times during his lifetime.

Shortly after he commenced practice Dr. Koch announced the discovery of tuberculin. Ransom's untiring energy was shown by his making a special journey to Berlin to obtain at first hand a supply of the new specific. Its effects were afterwards demonstrated to the medical profession in the wards of the General Hospital by himself and his colleagues. For seventeen years, until finally struck down by illness, he was the constant and devoted servant of that institution. For years he spent the whole of his Sunday mornings in the wards, besides numerous visits on week-days; add to this five or more long hours for out-patients on Friday afternoons, and some conception can be formed of the work he forced himself to do, instead of allowing some space for rest and recreation. He never had a strong physique, and the enormous amount of work he got through was a continual triumph of mind over matter. He was not only keen in acquiring but generous in imparting knowledge. On his Sunday morning visits he was frequently accompanied by a small but earnest band of men, who were never looked on as intruders but received with kindly welcome, and to them he spoke with ungrudging patience. For years he poured out treasures of his well-stored mind in his lectures to nurses. No matter what the occasion, he always gave of his best—*nihil tetigit quod non ornavit.* His relations with his honorary colleagues and with the resident medical and nursing staffs were always most cordial. In addition to the General Hospital, he was also a member of the honorary staff of the Nottingham and Notts. Convalescent Homes, to which institutions he rendered valuable service by advising on medical, hygienic, and administrative matters.

In 1892, when the British Medical Association met in Nottingham, W. B. Ransom was Secretary of the Section of Medicine, his father being President. He also took part in the Leicester meeting in 1905. When the British Association for the Advancement of Science met in Nottingham in 1893, Ransom was one of the Secretaries. He was a Governor of the Nottingham High School, and a member of the Council of the Nottingham University

College. He was President of the Nottingham Medico-Chirurgical Society during the session 1896–7, and delivered a masterly address on "Immunity," afterwards published in a small volume. He was a frequent contributor of valuable clinical and pathological material to the society. Year after year he delivered set addresses, and, however long these might be, he possessed the happy art of keeping his audience interested to the end. No matter what the subject—"Should Milk be Boiled?" "The Prevention of Tuberculosis," "Pernicious Anaemia," "Experiments on Animals," "Infantilism," "Modern Views on the Nervous System," and many more—all were treated in the same exhaustive manner. When he opened a discussion on "Diet" on December 5th, 1906, there seemed to be no diminution in the familiar energy of manner or depth and facility of treatment, yet that was the last occasion on which his voice was to be heard within the walls so often the silent witnesses of his eloquence.

Ransom threw himself heart and soul into the question of the open-air treatment of phthisis, which began to be strongly advocated in Great Britain about the year 1898. By his untiring labours and great enthusiasm a Society for the Prevention of Consumption was formed. A lasting monument to those labours remains in the form of the Sherwood Forest Sanatorium. By his own generous and self-sacrificing efforts a building fund of over £5,000 was collected, a site having been provided by the generosity of the Duke of Portland. It is no easy matter in these days to start a new medical charity, and it is not too much to say that this sanatorium owes its existence to the unstinted efforts of Dr. Ransom in arousing the necessary enthusiasm. No other of his contemporaries, medical or lay, possessed the unique combination of gifts which alone could make such an effort successful. The sanatorium was opened in 1901 for 14 patients, all of the poorer class. This beneficent work has been brought within reach of an ever-increasing number of patients, 32 of whom are now accommodated, while its effects are reinforced by the active efforts of a zealous after-care committee.

Ransom contributed numerous articles to medical literature, many being of permanent value. In addition to those already referred to, the following may be mentioned: The Occurrence of Sugar in Pathological Effusions (1889); A Case of Actinomycosis (*Med. Chir. Trans.*, 1892); A Case of Actinomycosis of the Orbit, with a Summary of seven other Cases of Actinomycosis (British Medical Journal, 1896); A Case of "Intestinal Sand" (*Quart. Med. Journ*, 1902); Two Cases of Acromegaly (British Medical Journal, 1895); On Lead Encephalopathy and the Use of Diachylon as an Abortifacient (British Medical Journal, 1900); Case of Tumour of the Spinal Dura Mater (British Medical Journal, 1894); Syringomyelia (*Journ. Path.*, vol. xi); A Case illustrating Kinesthesis (*Brain*, 1892); Tumours of the Corpus Callosum (*Brain*, 1895); Phthisis in Relation to Life Insurance (1900); The Vis Medicatrix Naturae (Presidential Address, Nottingham Naturalists' Society). This is by no means a complete list of his published writings, but it will serve to illustrate his indefatigable industry and the wide range and many-sided interest of his observations.

By a strange irony of fate Dr. Ransom fell a victim to the disease—consumption—which he had done so much to relieve. During the later years of his life he contracted several severe attacks of influenza. Definite symptoms of phthisis showed themselves in the summer of 1907, and the disease proved fatal about two and a quarter years later.

He married in 1898 a daughter of Mr. George Fowler, of Basford Hall. She and their three children survive him.

The following notes are communicated by Dr. Henry Head, F.R.S., Physician to the London Hospital:

I first knew William Bramwell Ransom in the year 1880, when we entered together at Trinity College, Cambridge. He had already received a considerable scientific training at University College, London, where he attended Professor Lankester's lectures. He was intensely enthusiastic for both comparative anatomy and physiology, and at the end of his first year became a major scholar of his college. After taking his degree with First Class Honours in the second part of the Natural Science Tripos (1883), he went to Naples and worked at the action of the heart in the cuttle fish and other allied animals. On this work he obtained a Fellowship at Trinity College, and then entered strenuously on his medical studies at University College Hospital. Here he held all the ordinary junior appointments, and was House-Physician to Dr. Ringer. He returned to Nottingham about the year 1890, and the rest of his career is better known to others than to me.

In his earlier days he was always known to us for his vivacity and for the agility of his intellect. In our debates (whether in the laboratory, the hospital, or the Natural Science Club) he was distinguished for the extraordinary accuracy of his knowledge over an unusually wide range.

He had been brought up in an atmosphere of natural history, and had been taught by his father to observe the phenomena of Nature. To this had been added a superb zoological training which gave him an unusually wide range for so young a man. His power of interesting himself in new medical subjects was the outcome of his agile mind, and I know no man who could put forward so luminous and accurate an account of some recent advance in medicine in which he had interested himself.

Unfortunately the last years of his life were haunted by perpetual ill-health, which lowered his vitality and made the work that he had previously loved a heavy tax on his failing strength.

The late Lieutenant-Colonel Henry James McLaughlin, M.B., C.M.Edin., R.A.M.C., who died with tragic suddenness from heart failure on November 23rd, at his residence,

Westcot, Callander, was the youngest son of the late Michael McLaughlin, Captain, H.M. 35th Regiment of Foot (the Royal Sussex). He was educated at the Edinburgh Institution, and took his degree at the university of that city in 1877. After passing through Netley, he entered the Army Medical Service, being first attached to the 48th (the Northamptonshire) at Cannanore, in which regiment his elder brother was Captain. The greater part of his time he served in India, but latterly he held appointments at various home stations. He retired in 1901 with the rank of Lieutenant-Colonel, and subsequently resided at Donne and at Callander. He was in his usual health on the evening of November 22nd, and attended the West Perthshire Unionist meeting in the Public Hall, Callander. His death, which occurred on the following morning, occasioned widespread regret. Much sympathy is felt with his widow, who is the only daughter of the late Mr. W. F. Kenmore, Advocate, Edinburgh.

YET another Indian Mutiny veteran has passed away in the person of Lieutenant-Colonel CHARLES EGBERT WYMOND BENSLEY, M.D., who died at North Kensington on December 5th, at the age of 75. He entered the Bengal Medical Department as an Assistant Surgeon, August 4th, 1856, becoming Surgeon, August 5th, 1868, retiring from the service in 1883. He had received the Indian Mutiny medal for his services in that campaign.

Medico-Legal.

WORKMEN'S COMPENSATION.

Fees for Medical Examination.

DR. R. J. COLLIE (London) writes: The only medical fees payable by an employer are the fees for the employer's *own* medical man attending to make the examination of the workman.

Paragraphs 4 and 14 of the first schedule to the Act provide that a workman *must submit himself for examination by* a duly qualified medical practitioner *provided and paid by the employer*. The wording is the same in both paragraphs.

I take this to mean, and it seems to me to be clear, that a workman must submit himself to the employer's medical man if required to do so, the employer paying the fee of the medical man whom he (the employer) selects for the purpose.

It seems to me that Dr. Brand is referring to what I should have thought was a somewhat unusual proceeding—that is, a workman submitting himself to his *own* doctor, who gives a certificate upon which the employer or the insurance company act. Of course, if an employer desires to have a certificate from the workman's doctor, he must pay for it, as the workman is not bound to furnish one, although he is bound to submit himself, if required, to the employer's doctor. It may be that employers and insurance companies find this course less expensive than providing their own doctor, and if they are satisfied with such a certificate instead of an examination by their own doctor, it is open to them to accept it. It is, of course, a matter of arrangement, but a workman cannot demand the right to furnish a certificate by his own doctor at the expense of his employer in lieu of submitting himself to examination by the employer's doctor.

DR. A. T. BRAND (Driffield, E. Yorks), writes: With regard to Dr. Bateman's comments, in your issue of the 11th, on my letter of December 4th, I beg to point out that it is clearly the intention of the Act that no unnecessary expense should fall upon the injured workman (indeed, it is hard enough that he should have to pay for medical attendance for injuries sustained in his employer's service), and that the employer should pay for what benefits himself alone. It is obvious that the employer should "desire" (the Act says "require"), an examination of his injured workman, since, without a medical certificate, the insurance company would not entertain his claim. As a matter of fact, this certificate, being indispensable, is invariably procured. As to "providing" the examiner, the acceptance of the certificate from the workman, after having handed it to him to be filled up, clearly implies the "provision" of the examiner; nor can it be of the slightest moment whether the examiner is the injured workman's personal attendant, or is a surgeon specially sent by the employer. The workman neither desires nor requires a certificate, why then should he pay for one? The employer alone requires one, and the Act says he shall pay for it. My object in bringing this matter before the profession is the fact that I have had trouble in getting these fees paid, and I should imagine others have had a similar experience. I found that the workman declines to pay because he thinks (and thinks rightly), that he ought not to pay for what is no concern of his; while the employer declines to pay because he thinks (and thinks wrongly) that the workman is responsible, under the mistaken notion that the latter is the one who benefits. Thus one is apt to fall between two stools, and get no fee! I offer to my medical brethren the following advice which is simple and satisfactory, since it will effectually obviate all friction and question as to the person responsible for the fee, *never grant a certificate without first receiving the fee for it;* to employers who boggle at paying the fee imposed upon them by the Act, I offer the suggestion that they should recover it from the insurance company, since their contract, in all probability, covers all liabilities including the medical examiner's fee.

Insanity following Trauma.

AJAX writes: A man, aged 40, fell and sustained a vertical fracture of the tibia into the knee-joint. During the time he was in bed he suffered from insomnia and slight depression, followed some ten weeks later by symptoms of insanity, which quickly cleared up. He returned to work, but within a week the mental symptoms returned in an aggravated form. Can this reasonably be looked upon as a case of traumatic insanity due to the shock of accident? There is no family history of insanity.

*** On consideration of the case as stated, it would not be unreasonable to suppose that the injury accelerated the development of an impending outbreak of insanity, or that it unmasked a disease which was already established. Our correspondent ought to satisfy himself as to the genuineness of the symptoms, the incapacity, and the relation of these to trauma.

GOODWILL.

INQUIRER wishes to know what is meant by the "goodwill" of a medical practice. This has been left to him without specification by a country practitioner who has resided in the same house for over thirty years, and is a distant relation.

*** "Goodwill" was defined by Lord Eldon in *Crutwell v. Lye* (17 Ves. 335) "as nothing more than the probability that the old customers will resort to the old place." "Inquirer," therefore, can only claim to be permitted to carry on this practice in the place of the deceased. The executors are under a legal obligation not to interfere with him in so doing, and must allow him every reasonable facility. But he has no right to the drugs, instruments, carriages, book debts, etc., unless he purchases them, and it is not certain that he can claim the first option in buying them. It is possible that he might restrain the executors from selling or renting the house to another medical practitioner, but it is not certain that he could compel them to let or sell it to him. If he did not wish to carry on the practice and the goodwill were sold by the executors, he would, of course, be entitled to the price paid.

Public Health AND POOR LAW MEDICAL SERVICES.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Newport.—Dr. Howard Jones, M.O.H., has issued his annual report to the members of the Newport (Mon.) Sanitary Committee. The number of inhabitants per house averaged 5.66, and he states that in spite of the fact that there was no scarcity in the number of dwellings in the borough, there was still an undoubted need for cheap cottages for the labouring classes in receipt of small wages. The births registered during the year numbered 2,504, or 32.3 per 1,000, which was 0.2 per 1,000 below the average for the previous ten years. The deaths registered were 1,238, or a death-rate of 15.9 per 1,000 per annum, compared with 16.8, the average death-rate for the past ten years. The infantile mortality was equal to 135.3 per 1,000, compared with 123.7 during the past ten years; 114 infants died before they were a month old, while 66 died within a week of birth. If this appalling death-rate had continued during subsequent weeks all the infants born in Newport during 1908 would have died within 38 weeks of their birth. After giving details of how children are improperly fed, he adds, "Such a record surely points to the necessity for some radical changes in the education of our girls, so that they may be better prepared for their life-work as mothers of the nation. It also shows the necessity for organized attempts at improving the standard of home and infant hygiene." The school for mothers has, he says, done excellent work, and was worthy of the support of all interested in promoting healthier and happier conditions of living for infants. The percentage of children vaccinated had fallen from 90.1 in 1902-3 to 70.5 last year. The Local Government Board had recently increased

the facilities for securing exemption certificates, and in a seaport town like Newport this was a very serious matter, and a great danger not only to the health of the community but to the financial prosperity of the town, for outbreaks of small-pox were very expensive. Dealing with milk supply, he says that a considerable number of small dealers had given up selling milk owing to their inability to comply satisfactorily with the requirements of the regulations. All the sources of water supply to the town were flood-water schemes, each liable to contamination from dwellings, etc. Sources of probable pollution still existed, especially on the Henllys and Newchurch streams, where cottage and farm drainage found its way into the streams. After referring to the careful supervision over the slaughterhouses in the borough, he stated that it was not possible to exercise supervision over animals slaughtered outside the borough and taken directly to butchers' premises or sold about the streets. Those who sold in the streets were not hawkers or pedlars, and were not registered. They should be required to obtain the permission of the local authority to sell perishable articles of food about the town, even though they were exempted from paying either taxes or rates. Altogether 37,834 lb. of meat was destroyed during the year.

NURSING IN WORKHOUSES.

THE unfortunate occurrence at Hemel Hempstead Workhouse, which led to the death of three inmates after they had been given baths, has been the subject of correspondence between the guardians, the Local Government Board, and the Workhouse Nursing Association. The latter body took the view that the persons really to be blamed were the guardians for making faulty arrangements in regard to sick nursing in the workhouse, and maintained that the fact that the clerk to the guardians was also clerk to the local justices had had an unfavourable influence on the original inquiry. The net outcome of the matter would seem to be a decision that a new nurse superintendent, as distinct from the matron of the workhouse, and two certificated nurses shall be appointed, and that the arrangements with regard to the bathing of inmates are to be overhauled. The Local Government Board sees no objection in the clerk to the guardians in this district holding more than one appointment.

POOR LAW SUPERANNUATION.

POOR LAW, whose age is 68, asks whether he will be entitled to superannuation if he now resigns his Poor Law appointments received in 1897, and if so, what is likely to be the amount awarded to him. The combined salaries amount to £95 a year with emoluments in addition.

*** As our correspondent is upwards of 65 years of age, and has completed twelve or thirteen years of Poor Law service, he will be entitled to receive as many sixtieths of his annual remuneration as his aggregate and completed years of service will number on the date of his retirement. The unit upon which this superannuation will be awarded will be reckoned by taking the average of all salaries and emoluments received by our correspondent for Poor Law services during his last five years of office.

HYPODERMIC INJECTIONS IN POOR LAW INFIRMARIES.

X. Y. Z. writes: Have the guardians the right to give directions that no sister in a Poor Law infirmary shall give (under written direction of the medical officer or assistant medical officer) a hypodermic injection to a patient, but that these shall be given by the medical officers themselves?

*** A board of guardians is acting within its powers in giving any such directions as will prevent minor operations in surgery being undertaken or performed in workhouses or infirmaries under their control by any unqualified person.

DR. J. BRINDLEY JAMES, of Hammersmith, has been nominated a medical officer for the purpose of the Elementary School Teachers' Superannuation Act, 1898.

THE President and Council of the Medical Graduates' College and Polyclinic gave a well-attended conversazione on December 10th. Various scientific demonstrations were given, including a lantern lecture by Dr. Bashford illustrating results recently obtained in the laboratories of the Imperial Cancer Research Fund.

HIS MAJESTY THE KING OF ITALY has conferred decorations upon the following officers, in recognition of their services with the field hospital at Catona after the earthquake in Sicily and Calabria last December: Major G. S. Crawford, R.A.M.C., to be Commander of the Crown of Italy; Captains H. S. Anderson, R.A.M.C., H. C. Winckworth, R.A.M.C., P. A. Lloyd-Jones, R.A.M.C., and R. Randon, Medical Officer, Royal Malta Artillery, to be Chevaliers of the same Order.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL.
THE offices of the British Medical Association and of the BRITISH MEDICAL JOURNAL are at 429, Strand, London.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

VOX CLAMANTIS would feel greatly obliged for suggestions as to the best method of renewing the worn-out black marks on a clinical thermometer.

CHASSEUR, who has recently taken over a practice in the centre of a provincial pack's country, and is able to get half a day's hunting once a week, asks hunting doctors whether he is expected to subscribe at the full rate.

URTICARIA AFTER ALBUMEN WATER.

DR. RONALD T. HEIDMAN, M.B., C.M.Edin. (Crouch Hill, N.), writes: I was called to see a bottle-fed baby about 9 months' old, who, during the last few days, had occasionally been sick, bringing up very curdled milk. As she had been sick after each of her feeds the morning I saw her, I ordered albumen water which was made very strong, the white of one egg in 3 or 4 oz. of water. Half an hour later I was called to see the child again. She was looking pale, and large red blotches were coming on her cheeks and forehead. While I was looking at her more appeared on her arms and legs and a few on the body. She seemed tired and uninterested in things, but not in pain. In less than an hour the spots had mostly disappeared, and the baby was much as usual. I have never seen this effect from egg albumen before and should like to know whether it was due to the strength of the solution or whether it is a common effect of albumen water. She has never had urticaria before or since.

ANSWERS.

POTABLE is informed that no notice can be taken of anonymous communications.

DIABETIC COOKERY BOOKS.

SUGAR.—Mrs. Ernest Hart's *Diet in Sickness and in Health* (London: The Scientific Press. 1895. 3s. 6d.), and Mr. and Mrs. Poole's *Cookery for the Diabetic*, 3rd edition (London: Longmans, Green, and Co. 1898. 2s. 6d.) contain the information as to cookery for which our correspondent asks.

CONSTIPATION IN AN INFANT.

DR. F. A. V. DENNING (Sligo) writes: In reply to "M.D.," I would suggest the infant be given cream with some water. The mother probably is putting the fat on herself, and her milk is devoid of it; hence the constipation.

TREATMENT OF MUSCULO-SPIRAL RHEUMATISM.

DR. H. D. MCCULLOCH (London, W.) writes: I beg to submit a reply to "Talbot's" query regarding treatment of musculo-spiral rheumatism (?) (*sic*), if chronic neuritis of this nerve is intended (BRITISH MEDICAL JOURNAL, November 27th, 1909, p. 1587). If the recent method of alcohol injections has had no effect, it would be well worth his while to try *x*-ray irradiation through leather filter over the course of the nerve by weekly applications, over 2 in. of its length each time. One milliampère of current should be kept passing through the focus tube, which is enclosed in a Belot's shield; the séance should last for fifteen minutes. The arm should be carried in a sling for the first month while under treatment, and a short course of local faradization finishes the treatment.

LETTERS, NOTES, ETC.

MESSRS. F. KIMBER, BULL, AND DUNCAN, solicitors, 6, Old Jewry, E.C., write to state that the Mr. Dudley Wright against whom an action was brought in the King's Bench Division on December 4th for the recovery of £150 in connexion with the rights of a book, entitled, *The Annals of Psychical Science*, is not their client, Mr. Dudley D'A. Wright, F.R.C.S., of Bentinck Mansions, W.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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A whole column	2	13	4
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An average line contains six words.

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NOTE.—It is against the rules of the Post Office to receive *poste Restante* letters addressed either in initials or numbers.